Buckland Area Transportation Study

Final Report

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Table of Contents

Executive Summary

ES 1.1 Introduction……. ES-1

ES 1.2 Study Background……... ES-1

ES 1.3 Public Involvement……. ES-2
ES 1.3.1 Website……. ES-2
ES 1.3.2 Study Advisory Committee…… ES-3
ES 1.3.3 Public Informational Meetings…… ES-3
ES 1.3.4 Targeted Stakeholder Outreach…… ES-3
ES 1.3.5 Planning Workshops…… ES-3

ES 1.4 Findings and Recommendations……. ES-3
ES 1.4.1 Roadway Modifications……. ES-4
ES 1.4.2 Roadway Improvements by Others……. ES-9
ES 1.4.3 TSM/TDM Alternatives…….. ES-9
ES 1.4.4 Transit Alternatives……. ES-10
ES 1.4.5 Bicycle/Pedestrian Alternatives..…… ES-10
ES 1.4.6 Land Use……. ES-11

ES 1.5 Implementation…… ES-11

ES 1.6 Funding…… ES-12

ES 1.7 Conclusions……... ES-12

1. Preferred Recommendations

1.1 Study Goals……. 1-1

1.2 Development of Preferred Option Packages..……. 1-1
1.2.1 Roadway Alternatives……. 1-1
1.2.2 TSM/TDM Alternatives…….. 1-2
1.2.3 Transit Alternatives……. 1-3
1.2.4 Bicycle/Pedestrian Alternatives…….. 1-3

1.3 Evaluation of Pros/Cons of Roadway Alternatives……..... 1-4

1.4 Recommendation Plan……..... 1-5
1.4.1 Roadway Alternatives……. 1-6
1.4.2 TSM/TDM Alternatives…….. 1-7
1.4.3 Transit Alternatives……. 1-8

1.4.4 Bicycle /Pedestrian Alternatives…… 1-9

2. Implementation Plan

2.1 Right of Way Impacts……. 2-1

2.2 Constructability Review…….. 2-1
2.2.1 Study High Priority Improvements…….. 2-2
2.2.2 Study Priority Improvements…….. 2-6
2.2.3 Transportation Management Plan……... 2-8

2.3 Construction Cost Estimates……... 2-9

2.4 Operations/Maintenance Cost Estimates (Transit Alternatives)……. 2-12

2.5 Environmental Summary……..... 2-14

2.6 Implementation Plan……... 2-15

2.7 Findings of Land Use Study…… 2-15

3. Financial Plan

3.1 Funding of Typical Transportation Programs…….. 3-1

3.2 Existing Revenue Sources…… 3-2

3.3 Available Grant Programs…… 3-2
3.3.1 Federal Programs……. 3-2
3.3.2 State Programs……. 3-2

3.4 Potential Revenue Sources…….. 3-2
3.4.1 State and Federal Funding Programs…….. 3-2
3.4.2 Innovative Financing…….. 3-3

APPENDIX A References Cited……. A-1

APPENDIX B Project Timeline..……..……..…… B-1

APPENDIX C Public Comments……..…….……. C-1

APPENDIX D Study Recommendations…… D-1

APPENDIX E Right of Way Impacts……. E-1

APPENDIX F	Construction Cost Estimates……	F-1
APPENDIX G	National Transit Summary..……..	G-1
APPENDIX H	Updated Aquifer Protection Area in Manchester…….	H-1
APPENDIX I	Public Comments…….	I-1

List of Tables

1-1 ROADWAY ALTERNATIVE PACKAGES……. 1-2
1-2 PROS AND CONS OF SCREENED OPTIONS……..…….. 1-5

2-1 RIGHT OF WAY IMPACTS…… 2-1
2-2 ESTIMATED CONSTRUCTION COSTS ……..…….. 2-11
2-3 ADDITIONAL ANNUAL BUS MILES……..…….. 2-13
2-4 SUMMARY COMPARISON OF ANTICIPATED ENVIRONMENTAL IMPACTS ASSOCIATED WITH PROPOSED TRANSPORTATION IMPROVEMENT OPTIONS ……. 2-14

3-1 FUNDING AND IMPLEMENTATION PLAN……. 3-5

List of Figures

ES-1 STUDY MILESTONES…..……... ES-2
ES-2 REDSTONE ROAD EXTENSION OVER I-84…… ES-6
ES-3 IMPROVEMENTS AT EXIT 63……. ES-7

2-1 COMPARISON OF TOTAL FUNDING AND O&M EXPENSES OF CONNECTICUT TRANSIT-HARTFORD DIVISION…… 2-11

List of Acronyms

AASHTO	American Association of State Highway and Transportation Officials
ADT	Average Daily Traffic
APA	Aquifer Protection Areas
AVL	Automated Vehicle Location
BART	Bay Area Rapid Transit
BMP	Best Management Practice
BRT	Bus Rapid Transit
BTS	Buckland Area Transportation Study
C/CAG	City/County Association of Governments
CERC	Connecticut Economic Resource Center
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CHP	California Highway Patrol
CMA	Congestion Management Agency
CMAQ	Congestion Mitigation and Air Quality Management
CMP	Congestion Management Plan
CO	Carbon Monoxide
CTDOT	Connecticut Department of Transportation
CRCOG	Capitol Region Council of Governments
CTDEP	Connecticut Department of Environmental Protection
CTP	County Transportation Plan
CT Transit	Connecticut Transit
DMS	Dynamic Message Signs
DOT	Department of Transportation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FTA	Federal Transit Administration
EJ	Environmental Justice
GIS	Geographic Information Systems
GPS	Global Positioning System
GRH	Guaranteed Ride Home
HAR	Highway Advisory Radio
HCM	Highway Capacity Manual
HOV	High Occupancy Vehicle

List of Acronyms (cont.)

ITS	Intelligent Transportation Systems
LOS	Level of Service
LWCFA	Land and Water Conservation Funding Act of 1965
LOCHSTP	Locally Coordinated Human Services Transportation Plan
MEV	Million Entering Vehicles
mp	Mile Post
MTC	Metropolitan Transportation Commission
MTSMA	Multicity TSM Agency
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NDDB	Natural Diversity Database
NO_2	Nitrogen Dioxide
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NTST	National Transit Summary and Trends
NWI	National Wetland Inventory
O&M	Operations and Maintenance
PAH	Polyaromatic Hydrocarbons
Pb	Lead
PCB	Polychlorinated Biphenyls
pc/mi/ln	Passenger cars per mile per lane
PM	Particulate Matter
RITA	Research and Innovative Technology Administration
RSTP	Regional Surface Transportation Plan
RTS	Regional Transit Strategy
RWIS	Roadway Weather Information System
SAFE	Service Authority for Freeways and Expressways
SCEL	Stream Channel Encroachment Lines
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SUBOG	Student Union Board of Governors
SPUI	Single Point Urban Interchange
TDM	Transportation Demand Management
TIF	Tax Increment Financing

List of Acronyms (cont.)

TIFIA	Transportation Infrastructure Finance and Innovation Act of 1998
TIP	Transportation Improvement Program
TOD	Transit Oriented Development
TSM	Transportation Systems Management
UConn	University of Connecticut
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

Executive Summary

ES 1.1 Introduction

The Capitol Region Council of Governments (CRCOG) and the Connecticut Department of Transportation (CTDOT) initiated the Buckland Area Transportation Study (BTS) in 2006 to identify near and long-term transportation improvements for the roadway network in the Buckland commercial area which encompasses portions of the Towns of Manchester, South Windsor and East Hartford.

This executive summary highlights the study background and process, technical findings and recommendations, potential funding sources and implementation schedule.

ES 1.2 Study Background

The Buckland Hills Area is located within the towns of Manchester and South Windsor, approximately nine miles east of Hartford, 45 miles northeast of New Haven, and 29 miles south of Springfield, MA.

In the mid-1980's the towns of Manchester and South Windsor enacted zoning and financial incentives to spur commercial and residential development in the area north of I-84. Over the following two decades the area has grown to include approximately three million square feet of commercial space representing one of the largest concentrations of retail and restaurant providers in the northeast. This concentration of retail and commercial development generates significant traffic volume in the Buckland Hills Area during the peak Friday and weekend afternoon periods, particularly during the high retail seasons.

In addition to traffic generated by the retail development, this area experiences significant through-traffic volumes on regional roadways, including I-84 (>100,000 vehicles per day), I-291, and I-384. The combination of retail-generated traffic, commuter traffic and regional through-traffic creates significant congestion that negatively impacts area access, circulation, travel times, and safety. Unfortunately, the level of roadway improvements has not kept pace with the accelerated rate of development.

The Buckland Area Transportation Study was initiated to achieve the following overarching goals:

- Formulate plans of improvement for operations and safety along the major elements that define the transportation system in the study area, including roadways, access drives, transit and bicycle and pedestrian services;

- Plan for future growth and development. It is understood that the Buckland commercial area is of regional stature, with as yet unrealized potential for additional growth;

- Ensure transportation equity and balance by identifying transportation improvement alternatives that promote enhanced mobility and quality of life through the use of all transportation modes.

The study milestones are shown in the following Figure ES-1.

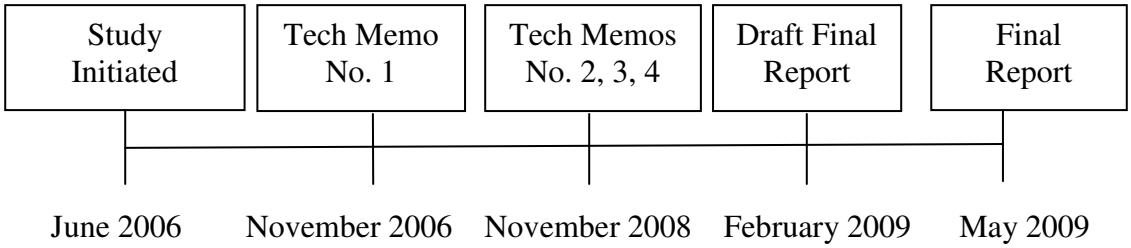

FIGURE ES-1: STUDY MILESTONES

ES 1.3 Public Involvement

The Public had several opportunities to provide input to this study. A brief description of the Public Involvement program is provided in the following paragraphs.

ES 1.3.1 Website

A project website, www.bucklandstudy.org, was developed and continually updated to provide study information, publish meeting notices, and collect public comments. For those who wished to share their personal travel experiences in the Buckland area, or provide comments, a brief survey was provided on the site. In order to publicize the site, business-card sized information cards were developed and provided to shop owners, municipal offices and other establishments for the public to take. Public comments and survey results are compiled in Appendix D.

ES 1.3.2 Study Advisory Committee

Local, State and Federal Resource Agencies and other stakeholders were invited to participate on an Advisory Committee that met at specific milestones in the process to provide input to issues and alternatives being considered. The Advisory Committee meetings were open to the public, and opportunities to comment were provided. A total of five advisory committee meetings have been held during the course of this study. A list of Advisory Committee members is attached in Appendix C.

ES 1.3.3 Public Informational Meetings

At key milestones in the study, Public Informational Meetings were held. The meetings were held at central locations in Manchester and South Windsor. The public had the opportunity to ask questions and provide comments. Times and locations of meetings were advertised in local papers, on the website and in high-traffic locations through the region. A total of three public informational meetings have been held during the course of this study.

ES 1.3.4 Targeted Stakeholder Outreach

In addition to the Public Informational Meetings, the Study Team made every effort to identify stakeholder groups that had specific issues to discuss. The study team arranged the following meetings with stakeholders:

- Presentation: Mayor, Town of South Windsor
- Presentation: Mayor, Town of Manchester
- Presentation: Mayor, Town of East Hartford
- Meeting with Greater Manchester Chamber of Commerce
- Meeting with South Windsor Chamber of Commerce
- Presentation: South Windsor Town Council
- Presentation: Manchester Town Council
- Meeting with Emergency Responders
- Meeting with Bike/Ped Stakeholders
- Meeting with Transit Stakeholders

The study team received first hand information about various facilities or the problems faced by the users. The study team gave due consideration to their feedback in the process of recommending improvements.

ES 1.3.5 Planning Workshops

Seven planning workshops have been held during the course of this study. These workshops were attended by Study Team members and other designated persons, appropriate for the topic being discussed. The focus of these meetings was to facilitate the decision making process. A total of seven planning workshops have been held during the course of this study.

ES 1.4 Findings and Recommendations

Technical Memorandum No. 1 – "Existing and Future Conditions Report", documents the level of traffic congestion that is anticipated to occur within the study corridor by the year 2030 assuming no significant infrastructure improvement or expansion.

Furthermore, this report clearly stated that doing nothing in the way of transportation infrastructure improvement and/or expansion will result in gridlock and further decline in quality of life for the residents of the study corridor. Identification of various needs and deficiencies within the corridor was achieved by plan review, field investigation, stakeholder meetings, advisory committee input and public outreach via public meetings and public comments documented on the project website.

Technical Memorandum No. 2 – "Future Conditions Report – Roadway Alternatives", documents the alternatives development and refinement process for roadway alternatives. Brainstorming through advisory committee workshop resulted in a number of ideas. The study team converted these ideas into twenty (20) design concepts. The initial screening process reduced these concepts to ten (10) and further screening narrowed these ten (10) concepts to four (4) concepts.

Technical Memorandum No. 3 – "TSM/TDM, Transit, Bike/Pedestrian Facilities", recommended improvements to make streets in the study area friendlier for shared use.

Technical Memorandum No. 4 – "Land Use Study", identified effective land use management strategies for the study area municipalities to consider managing and mitigating traffic congestion and also offered a range of effective techniques that could help local governments direct future growth in the Buckland area towards greater walkability and multimodal access.

A planning workshop was conducted on December 16, 2008 to finalize the recommendations made in the technical memorandums. The technical working group identified the following recommendations as the best suited to address the future needs of the study area.

ES 1.4.1 Roadway Modifications

ES 1.4.1.1 Redstone Road Extension and Exit Ramp to I-291

Modify existing I-84 eastbound off-ramp at Exit 62 to provide access from the existing ramp to proposed structures over Buckland Street and existing on-ramp to I-84 eastbound. Continue the service road adjacent to eastbound I-84 to connect to the proposed extension of Redstone Road with an at-grade intersection. Extend existing Redstone Road to intersect with the proposed service road from the I-84 eastbound Exit 62, and continue Redstone Road over I-84 and the westbound frontage roads with a new overpass. On the west side of the overpass an on-ramp to I-84 westbound is also proposed from an at-grade intersection with Redstone Road. Redstone Road will continue to Buckland Hills Drive between the ring-road at "The Shops at Buckland Hills" and "Wal-Mart". Potential solutions to connect the retail parcels with Redstone Road include at-grade intersections, ramps to access elevated roadways and combinations of various design elements. In conjunction with the improvements at Redstone Road, this

improvement also includes changing the location of where vehicles access I-291 westbound from I-84 westbound. The existing I-84 westbound ramp to I-291 will be closed and I-291 traffic will be directed to take westbound Exit 62 (Westbound Frontage Road). A connection will be made from the Westbound Frontage Road to I-291 west.

The following Figure ES-2 shows proposed Redstone Road extension over I-84.

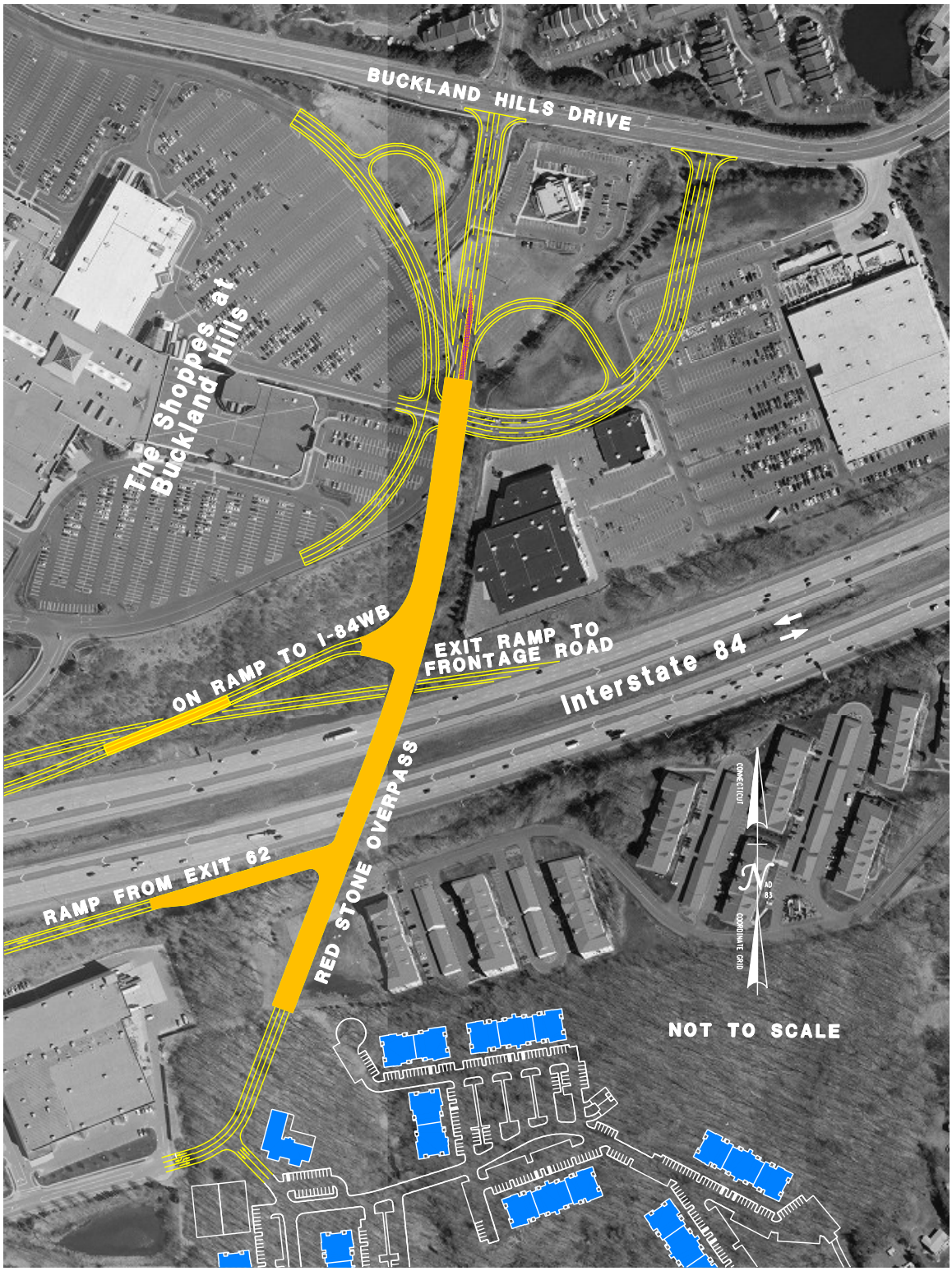

FIGURE ES-2: REDSTONE ROAD EXTENSION OVER I-84

ES 1.4.1.2 Access improvements at I-84 westbound (new) ramp Exit 63

A new off-ramp from I-84 westbound will be provided for traffic exiting to travel northbound on Route 30 (Deming Street). The ramp will merge onto Route 30 between I-84 and McIntosh Drive. Access to McIntosh Drive will be considered during the preliminary design phase. The existing I-84 westbound off-ramp to N.B./S.B. Route 30 (Deming Street) will be converted to an exit ramp for traffic traveling southbound (only) on Route 30 Deming Street. This will be achieved through modifications to the ramp and signal configuration where it meets with Route 30.

Although, not part of the Buckland Transportation Study, improvements to the intersection of Oakland Street, Tolland Turnpike (Route 30) and the I-84 eastbound ramps are currently being designed by CTDOT.

The following Figure ES-3 shows proposed improvements to eastbound I-84 Exit 63.

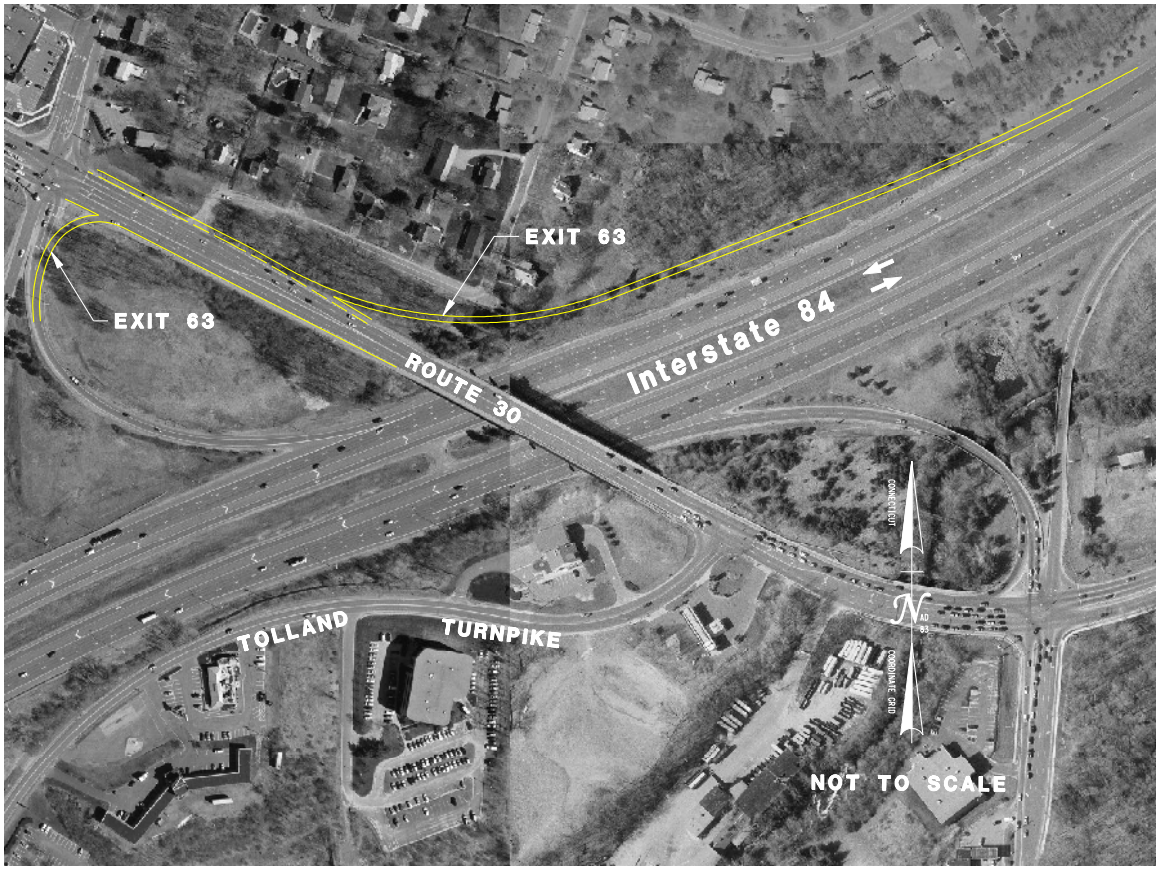

FIGURE ES-3: IMPROVEMENTS AT EXIT 63

ES 1.4.1.3 Transit Center and HOV ramps

Improved access to the proposed Transit Center which is to be located in the commuter parking lot between I-84, Buckland Street and Pleasant Valley Road have three potential improvements. The main element of this improvement will provide a direct connection with the existing HOV Lanes on I-84 through the construction of a fly-over ramp from the HOV Lanes to the existing access ramp for Pleasant Valley Road and the Westbound Frontage Road. The existing HOV off-ramp to Buckland Street will be eliminated as part of this improvement.

ES 1.4.1.4 Auxiliary Lanes between Exits 62 & 63

Utilizing the existing right-of-way, auxiliary lanes between exit 62 and exit 63 should be constructed by reallocation of the space available for travel lanes, shoulders and the separator between the HOV Lanes and the main traffic lanes.

ES 1.4.1.5 Single Point Urban Interchange (SPUI) at the intersection of Buckland Street, Pleasant Valley Road and Buckland Hills Drive

A bridge connecting Pleasant Valley Road and Buckland Hills Drive will carry through traffic over Buckland Street. Since the traffic movement at the intersection of Buckland Street and flyover ramps is controlled by a single three phase signal, traffic models predicted improvement in the level of service of this intersection. However, as per the recommendation of the Advisory Committee, the need and feasibility of creating SPUI will be assessed in future.

ES 1.4.1.6 Realignment of Pleasant Valley Road at the connection to the Frontage Road to I-84 westbound, with a connection to the proposed transit center

Provide a connection to the proposed Transportation Center by realigning the intersection of Pleasant Valley Road and the connector to the Frontage Road to I-84 westbound to form a four-way intersection. The fourth leg of the intersection will serve as the access to the future transit center.

The need and feasibility of this improvement will be assessed in the future studies.

ES 1.4.1.7 Connection from Pleasant Valley Road to Evergreen Walk

A connection from Pleasant Valley Road to Evergreen Walk shopping area will provide additional access to shoppers in and out of Evergreen Walk. This additional access will improve the level of service of the intersection of Pleasant Valley Road, Buckland Hills Drive and Buckland Street.

ES 1.4.2 Roadway Improvements by Others

The Towns and CTDOT have undertaken the task of design of improvements at some of the locations in the study area. The study team was apprised of these proposed improvements during the technical working group meeting on December 16, 2008. At the time of writing this report, it was still uncertain as to who will be responsible for these improvements. These proposed improvements are:

ES 1.4.2.1 Auxiliary lanes from exit 62 to exit 64 along I-84

ES 1.4.2.2 Improvements to the intersection of Deming Street and I-84 eastbound ramps

ES 1.4.2.3 Proposed signal at the intersection of the driveway of Lazy Boy and Buckland Hills Drive in the Town of Manchester

ES 1.4.2.4 Proposed widening of Buckland Hills Drive between the driveway to Lazy Boy and driveway to Wal-Mart.

ES 1.4.3 TSM/TDM

The congestion experienced as a result of various issues identified in Technical Memorandum No. 1 limits free movement and hinders emergency vehicle access in the Buckland Hills Area. While increasing existing roadway capacity is one option to mitigate congestion, it is often very expensive to add capacity to an existing roadway network. The other option is to either use an existing roadway network more efficiently or reduce the traffic demand.

Transportation Systems Management (TSM) techniques support making the existing transportation system operate in a more efficient manner.

Transportation Demand Management (TDM) techniques support the application of strategies and policies to reduce automobile travel demand or to redistribute demand in space and time.

TSM/TDM techniques recommended by this study are:

- Change McIntosh Drive to right-in and right-out type access at its intersection with Deming Street;
- McDonalds driveway, located at the intersection of Deming Street and Hale Road, right-in and right-out type access;
- Change the alignment of Deming Street at its intersection with Oakland Street so that Deming Street intersects Oakland Street at approximately 90 degrees;
- Provide advanced guidance signs for easy way-finding for tourists;

- Modify connectivity and linkages as detailed in Technical Memorandum No. 2;
- Coordinate traffic signal timing on arterial and collector streets;
- Expedite incidence response by provision of installation of placards to assist in pinpointing location of the incidents;
- Install Intelligent Management Systems to better utilize the existing infrastructure;
- Encourage ridesharing (carpooling and vanpooling) to reduce travel demand;
- Encourage Transit Oriented Development to provide community access to buses or rail;
- Encourage employers to offer Guaranteed Ride Home programs. These programs have shown to be most successful in reducing total traffic volume and increasing the use of alternate means of transport.

ES 1.4.4 Transit Alternatives

Existing transit service within the Buckland Hills Mall area consists of a network of local and express bus routes operated by Connecticut Transit (CT Transit), plus Paratransit and shuttle buses serving specific market areas.

The study team, based on this evidence and the feedback from the Advisory Committee and stakeholders, recommended the following improvements:

- Improve bus stop signage and shelters;
- Improve/consolidate existing bus routes;
- Consolidate existing bus stops;
- Provide Circulator Shuttle bus service;
- Replace bus radio system;
- Maintain/improve level of para-transit service;
- Implement Intelligent Transportation Systems;
- Construct multi-modal transportation center; and
- Provide Bus Rapid Transit to Manchester and Vernon.

ES 1.4.5 Bike/Pedestrian Facilities

The study team took the inventory of various bike/ped facilities, such as sidewalks, crosswalks, bike lanes and pedestrian signals, within the study area. The study team analyzed the inventory for gaps/discontinuities among these facilities. Based on the feedback from stakeholders and the Advisory Committee, the study team recommended the following improvements:

- Maintain continuity of sidewalks on all the streets in the study area;
- Improve the riding surface of existing mixed use trails;
- Provide exclusive bike lanes on the roads identified in the study;
- Provide crosswalks and pedestrian signals at intersections identified in the study

- Provide a bike station in the proposed transit center;
- Provide weather protected bike shelters at locations identified in the study.

ES 1.4.6 Land Use

The land use study examined the effect of land use patterns/land use planning decisions on mobility within and through the area. The study investigated, via case studies, the potential for land use management strategies to influence travel behavior (use of alternate modes) and enhance and sustain mobility and considered this in the context of full buildout in the Buckland study area under existing land use controls.

The land use study findings are:

- Land use management techniques can complement other congestion mitigation efforts by creating a critical mass of mixed-use and more options for travel;

- The greatest potential impact from best land use management strategies for Buckland may be the reduction of internal automobile trips within the study area to offset current conditions where people are now making multiple short trips amongst retail and service destinations;

- A pattern of mixed-use concentrated activity nodes within the Buckland study area in an organized pattern relative to one another can achieve car-trip reductions much more effectively than a random general increase in density and land use types consistent with the current zoning.

ES 1.5 Implementation

The technical working group classified the recommended improvements in two categories: high priority and priority.

The following recommendations are expected to have greatest benefit upon traffic operations in the study area and are considered high priority improvements:

- Although, not part of the Buckland Transportation Study, improvements to the intersection of Oakland Street, Tolland Turnpike (Route 30) and I-84 eastbound ramps is currently in the design stage.

- Redstone Road overpass over I-84 and new slip ramp to northbound I-291 from existing westbound frontage road;

- Additional westbound off ramp at exit 63 on westbound I-84;

- HOV ramps, multi-modal transportation center, and transit improvements.

The following recommendations are considered as priority improvements:

- Single Point Urban Interchange (SPUI) at the intersection of Pleasant Valley Road, Buckland Street and Buckland Hills Drive;
- Improvements to the intersection of Pleasant Valley Road and the I-84 ramps;
- Auxiliary lanes along I-84 between exits 62 and 63.
- Connection from Pleasant Valley Road to Evergreen Walk;

The technical working group agreed that all TSM/TDM, and Bike/Ped improvements are high priority improvements to be implemented as and when sufficient funds become available.

ES 1.6 Funding

Funding for all recommendations must come from various Federal, State, Local and potential private funding sources. Since this study is just the first step in a multi-phased planning, design and construction process, funding will be required for environmental documentation, and design and construction over a period of years. The CRCOG in conjunction with State and Local authorities will likely incorporate the recommendation elements into the revised Regional Transportation Plan and the Transportation Improvement Program (TIP) documents.

These recommendations will compete for funding with other pre-existing projects and proposals. Based on the support that the high priority recommendations received from the corridor towns, the CRCOG and the State Agencies, it is anticipated that several if not all high priority recommendations will be added to the aforementioned documents for funding allocation.

There are a number of priority recommendations that can be funded through state enhancement funds, local funding and private funding. To the extent possible these other funding sources should be engaged.

ES 1.7 Conclusions

The Buckland Area Transportation Study has recommended a set of transportation improvements and land use strategies to reduce congestion, enhance mobility and encourage alternate travel modes.

Together, these strategies will improve mobility throughout the region, enabling economic growth and enhancing the quality of life throughout the region.

1 – Preferred Recommendations

1.1 Study Goals

The goals and objectives of this study are:

- Formulate plans of improvement for operations and safety along the major elements that define the transportation system in the study area, including roadways, access drives, transit and bicycle and pedestrian services. Plans that have the greatest potential to improve safety, reduce congestion and improve air quality will be given the greatest consideration for advancement.

- Plan for future growth and development. It is understood that the Buckland commercial area is of regional stature, with as yet unrealized potential for additional growth. Every effort will be made to identify and incorporate state, local and regional plans of development for use in identifying improvement alternatives in the study.

- Ensure transportation equity and balance by identifying transportation improvement alternatives that promote use of all transportation modes.

1.2 Development of Preferred Option Packages

The roadway alternatives development and screening processes for roadway options are described in Technical Memorandum No. 2. The recommendations related to TSM/TDM, transit, and bicycle and pedestrian alternatives are described in Technical Memorandum No. 3. Please see Appendix D for the graphical presentation of recommendations.

The preferred packages are described below. Some components are common between packages, but their utility is independent.

1.2.1 Roadway Alternatives

The following Table 1-1 summarizes screened roadway alternatives.

TABLE 1-1: ROADWAY ALTERNATIVE PACKAGES

Option 2	• Ramp from westbound frontage road to I-291; • Red Stone Road Overpass; • Half frontage roads along I-84 (between Buckland Street and Red Stone Overpass); • Single Point Urban Interchange (SPUI) at the intersection of Buckland Hills Drive/Pleasant Valley Road/Buckland Street; • Roundabout at the intersection of Pleasant Valley Road/I-84 westbound Ramps; • Second exit ramp for I-84 westbound at exit 63.
Option 3	• Ramp from westbound frontage road to I-291; • Full Frontage Roads along I-84 (between Buckland Street and Exit 63); • Single Point Urban Interchange (SPUI) at the intersection of Buckland Hills Drive/Pleasant Valley Road/Buckland Street; • Second exit ramp for I-84 westbound at exit 63.
Option 9	• Add HOV flyover ramps to multimodal transit center from I-84 EB off and to I-84 westbound on ramp.
Option 10	• Ramp from westbound frontage road to I-291 • Auxiliary Lanes along I-84 (between Buckland Street and exit 63); • Single Point Urban Interchange (SPUI) at the intersection of Buckland Hills Drive/Pleasant Valley Road/Buckland Street; • A signalized 'T' Intersection at the intersection of Pleasant Valley Road/I-84 westbound Ramps; • Second exit ramp for I-84 westbound at exit 63.

1.2.2 TSM/TDM Alternatives

The study recommended the following TSM/TDM improvements:

- Change McIntosh Drive to right-in and right-out type access at its intersection with Deming Street;
- McDonalds driveway, located at the intersection of Deming Street and Hale Road, right-in and right-out type access;
- Change the alignment of Deming Street at its intersection with Oakland Street so that Deming Street intersects Oakland Street at approximately 90 degrees;
- Modify geometry of intersection of driveways to Best Buy/Circuit City and Slater Street;
- Provide advanced guidance signs for easy way-finding for motorists;
- Modify connectivity and linkages as detailed in Technical Memorandum No. 2;
- Coordinate traffic signal timing on arterial and collector streets;
- Expedite incidence response by provision of dynamic message signs, installation of placards to assist in pinpointing location of the incidence;

- Install Intelligent Management Systems to better utilize the existing infrastructure;
- Encourage ridesharing (carpooling and vanpooling) to reduce travel demand;
- Encourage Transit Oriented Development to provide community access to public transportation;
- Encourage employers to offer Guaranteed Ride Home programs. These programs have shown to be most successful in reducing total traffic volume and increasing the use of alternate means of transport.

1.2.3 Transit Alternatives

The study recommended the following Transit improvements:

- Improve bus stop signage and shelters;
- Improve/consolidate existing bus routes;
- Consolidate existing bus stops;
- Increase service frequency;
- Expand service hours;
- Provide Circulator Shuttle bus service;
- Replace bus radio system;
- Maintain/improve level of para-transit service.
- Implement Intelligent Transportation Systems;
- Acquire alternative fuel vehicles;
- Construct multi-modal transportation center;
- Provide Bus Rapid Transit to Manchester and Vernon.

1.2.4 Bicycle and Pedestrian Alternatives

The study recommended the following Bicycle/ Pedestrian improvements:

- Maintain continuity of sidewalks on all the streets identified in Technical Memorandum No. 3;
- Provide exclusive bike lanes on the roads identified in Technical Memorandum No. 3;
- Provide crosswalks and pedestrian signals at intersections identified in Technical Memorandum No. 3;
- Provide a bike station in the proposed transit center;
- Provide weather protected bike shelters at locations identified in Technical Memorandum No. 3.

1.3 Evaluation of Pros/Cons of Roadway Alternatives

All the options, except option 9, involve provision of SPUI, a connection to northbound I-291, a second exit ramp at exit 63 and a connection to Evergreen Walk from Pleasant Valley Road. Table 1-2 summarizes the pros and cons of improvements included in each of the specific options.

The pros and cons of these alternatives are:

Pros-

- SPUI at the intersection of Buckland Street and Pleasant Valley Road provides much needed relief from delay and congestion;
- A connection from Pleasant Valley Road ramps to northbound I-291 provides the mall shoppers an access to northbound I-291;
- A connection from Pleasant Valley Road to Evergreen Walk provides shoppers an option to bypass the intersection of Buckland Street and Pleasant Valley Road in order to visit Evergreen Walk from the west side of the study area.

Cons-

- Construction of SPUI is a capital intensive project;
- Connection to Evergreen Walk involves connecting a town road to a private road.

TABLE 1-2: PROS AND CONS OF SCREENED OPTIONS

Option 2	Pros: • The Redstone Road extension provides an additional access for shoppers to the mall area from the south of I-84. • A roundabout would fit in with the emerging trend of preference of a roundabout over a signalized intersection. Cons: • The Redstone Road extension involves connecting a town road to a private road. • Because of very high traffic volume on Pleasant Valley Road, a two-lane roundabout fails to operate at the desired level of service.
Option 3	Pros: • Frontage roads on both sides of I-84 reduce weaving turbulence on the main line and thus offer relatively smooth through movement on the main line. Cons: • Frontage roads do not enhance the LOS of through movement in the design year. • The intersection of I-84 ramps and Pleasant Valley Road fails to operate at desired LOS. • No impact on Buckland Street traffic volumes.
Option 9	Pros: • HOV ramps provide access to the proposed transit center. • HOV ramps reduce traffic on Buckland Street. Cons: • HOV flyovers over I-84 are capital intensive projects.
Option 10	Pros: • Auxiliary lanes provide additional mainline capacity between exits 62 and 63 and reduce weaving on the main line. • T-intersection at the intersection of I-84 ramps and Pleasant Valley Road enhances the LOS of the intersection to the acceptable level. Cons: • Auxiliary lanes do not improve the LOS of I-84 corridor.

1.4 Recommendation Plan

The technical working group finalized the most preferred set of improvements during a planning workshop conducted on December 16, 2008. Based on the pros and cons of all the options and feedback the study team received from the Advisory Committee and planning workshops, the improvements that had highest potential of meeting the study objectives were selected to arrive at the final set of alternatives that would best serve the

objectives of this study. The following alternatives summarize recommendations of this study.

1.4.1 Roadway Alternatives

The technical working group and the study team identified key improvements in each of the improvement options and determined which key improvements should be combined to yield the most beneficial set of recommendations. The final set of recommended improvements is described below:

1.4.4.1 Redstone Road Extension and Exit Ramp to I-291

Close the existing westbound exit from I-84 to northbound I-291 and provide a new crossover connection between the existing Frontage Road and the remaining northbound ramp to I-291. Construct a fly-over from the I-84 eastbound off ramp, over Buckland Street, over existing on ramp from Buckland Street to I-84 eastbound and connect to an extension of the existing Redstone Road which in turn will extend over I-84 to Buckland Hills Drive and the mall area. A ramp from this new Redstone Road Extension will be provided to access I-84 westbound.

1.4.4.2 Access Improvement at Exit 63 off-ramp of I-84 WB

A new off-ramp from I-84 westbound will be provided for traffic exiting to travel northbound on Route 30 (Deming Street). The ramp will merge onto Route 30 between I-84 and McIntosh Drive. The existing off-ramp will be reconfigured to merge with southbound lanes of Route 30 (Deming Street).

1.4.4.3 Transit Center and HOV ramps

Provide a direct connection with the existing HOV Lanes on I-84 through the construction of a fly-over ramp from the HOV Lanes to the existing access ramp for Pleasant Valley Road and the Westbound Frontage Road. The existing HOV off-ramp to Buckland Street will be eliminated as part of this improvement.

1.4.4.4 Auxiliary Lanes between Exits 62 & 63

Utilizing the existing right-of-way, auxiliary lanes between Exit 62 and Exit 63 can be constructed by reallocation of the space available for travel lanes, shoulders and the separator between the HOV Lanes and the main traffic lanes.

1.4.4.5 Single Point Urban Interchange (SPUI) at the intersection of Buckland Street, Pleasant Valley Road and Buckland Hills Drive.

A bridge connecting Pleasant Valley Road and Buckland Hills Drive will carry through traffic over Buckland Street. Since the traffic movement at the intersection of Buckland Street and flyover ramps is controlled by a single three phase signal, traffic models predicted improvement in the level of service of this intersection. However, as per the recommendation of the Advisory Committee, the need and feasibility of creating SPUI will be assessed in future.

1.4.4.6 Realignment of Pleasant Valley Road at the connection to the Frontage Road to I-84 westbound, with a connection to the proposed transit center

Provide a connection to the proposed Transportation Center by realigning the Intersection of Pleasant Valley Road and the connector to the Frontage Road to I-84 westbound to form a four-way intersection. The fourth leg of the intersection will serve as the access to the future transit center.

1.4.4.7 Connection from Pleasant Valley Road to Evergreen Walk

A connection from Pleasant Valley Road to Evergreen Walk shopping area will provide additional access to shoppers in and out of Evergreen Walk. This additional access will improve level of service of the intersection of Pleasant Valley Road, Buckland Hills Drive and Buckland Street.

Please refer to Appendix D for the graphical presentation of these recommendations.

1.4.2 TSM/TDM Alternatives

The congestion experienced as a result of various issues identified in Technical Memorandum No. 1 limits free movement and hinders emergency vehicle access in the Buckland Hills Area. While increasing an existing roadway capacity is one option to mitigate congestion, it is often very expensive to add capacity to an existing roadway network. The other option is to either use existing roadway network more efficiently or reduce the traffic demand.

Transportation Systems Management (TSM) techniques support making the existing transportation system operate in a more efficient manner.

Transportation Demand Management (TDM) techniques support the application of strategies and policies to reduce automobile travel demand or to redistribute demand in space and time.

TSM/TDM techniques recommended by this study are as below:

- Change McIntosh Drive to right-in and right-out type facility at its intersection with Deming Street;
- McDonalds driveway, located at the intersection of Deming Street and Hale Road, right-in and right-out type facility;
- Change the alignment of Deming Street at its intersection with Oakland Street so that Deming Street intersects Oakland Street at approximately 90 degrees;
- Provide advanced guidance signs for easy way-finding for tourists;
- Modify connectivity and linkages as detailed in Technical Memorandum No. 2;
- Coordinate traffic signal timing on arterial and collector streets;
- Expedite incidence response by provision of installation of placards to assist in pinpointing location of the incidence;
- Install Intelligent Management Systems to better utilize the existing infrastructure;
- Encourage ridesharing (carpooling and vanpooling) to reduce travel demand;
- Encourage Transit Oriented Development to provide community access to buses or rail;
- Encourage employers to offer Guaranteed Ride Home programs. These programs have shown to be most successful in reducing total traffic volume and increasing the use of alternate means of transport.

1.4.3 Transit Alternatives

Existing transit service within the Buckland Hills area consists of a network of local and express bus routes operated by Connecticut Transit (CT Transit), plus Para-transit and shuttle buses serving specific market areas.

The study team, based on the feedback from the Advisory Committee and stakeholders, recommended the following improvements:

- Improve bus stop signage and shelters;
- Improve/consolidate existing bus routes;
- Consolidate existing bus stops;
- Provide Circulator Shuttle bus service;
- Replace bus radio system;
- Maintain/improve level of para-transit service;
- Implement Intelligent Transportation Systems;
- Construct multi-modal transportation center; and
- Provide Bus Rapid Transit to Manchester and Vernon.

1.4.4 Bicycle/Pedestrian Alternatives

The study team took the inventory of various bike/ped facilities, such as sidewalks, crosswalks, bike lanes and pedestrian signals, within the study area. The study team analyzed the inventory for gaps/discontinuities among these facilities. Based on the feedback from stakeholders and the Advisory Committee as well as the data collected, the study team recommended the following improvements:

- Maintain continuity of sidewalks on all the streets identified in Technical Memorandum No. 3;
- Provide exclusive bike lanes on the roads identified in Technical Memorandum No. 3;
- Provide crosswalks and pedestrian signals at intersections identified in Technical Memorandum No. 3;
- Provide a bike station in the proposed transit center;
- Provide weather protected bike shelters at locations identified in Technical Memorandum No. 3.

2 – Implementation Plan

The purpose of an implementation plan is to present a schedule for implementing the recommendations made by the Buckland Area Transportation Study. The recommended alternatives are most likely to yield significant amounts of improvements to the performance of roadways and enhance the quality of life.

2.1 Right of Way Impacts

The Right of Way impact analysis was conducted to quantify the total number of properties impacted, the type of property and the total number of potential relocations. The proposed alternatives were graphically overlain on the parcel data obtained from CRCOG. Please refer to Appendix E for the Right of Way impacts of recommended alternatives.

The following Table 2-1 shows the Right of Way impact of the proposed improvements.

TABLE 2-1: RIGHT OF WAY IMPACTS

	Type of property			
	Residential		Commercial	
	South Windsor	Manchester	South Windsor	Manchester
Number of properties impacted	2	6	1	19
Number of potential relocations	2	0	0	6

2.2 Constructability Review

Constructability is not anticipated to be an issue for the implementation of the proposed improvements. A review of the concept plans did not reveal any issues that would be considered "fatal flaws" to prevent the project from going to design. The impacts to the existing highways, ramps and frontage roads from the proposed improvements should be minimized through typical Maintenance and Protection of Traffic during construction (signalization, lane shifts, lane closures, brief highway closures, staging and temporary supports/bents.) The construction is not expected to require specialty or unusual work, relative to the types of proposed improvements, which will result in higher construction costs. Traffic mobility and construction work zone safety can be achieved through preparation of Transportation Management Plans with appropriate strategies for all of the improvements as they progress through the design process.

The proposed improvements are described below as they were prioritized during Planning Workshop No. 7 held on 16 December 2008. The constructability challenges and some of the potential solutions are identified for the individual improvements.

Although, not part of the Buckland Transportation Study, improvements to the intersection of Oakland Street, Tolland Turnpike (Route 30) and I-84 EB ramps is currently in the design stage. Implementation of the improvements is a high priority to the Buckland Transportation Study stakeholders. Constructability review of this project will be done independently of the Buckland Transportation Study.

2.2.1 Study High Priority Improvements

2.2.1.1 Redstone Road Extension and Exit Ramp to I-291

I-84 Eastbound exit 62: modify the existing off-ramp to provide access from the existing ramp to proposed structures over Buckland Street and over the eastbound on-ramp to I-84.

- Investigate existing drainage systems in the vicinity of the proposed ramp and structures.
- The southwesterly limit of the proposed improvements extends into an Aquifer Protection Area. The construction of these improvements should comply with the Best Management Practices (BMPs) recommended by the Town of Manchester/CTDEP.
- Erection of the bridge superstructure at Buckland Street will require temporary lane closures or detours on Buckland Street, with the potential for mandatory nighttime construction.
- Erection of the bridge superstructure over the I-84 eastbound on-ramp from Buckland Street will require temporary ramp closures or detours, with the potential for mandatory nighttime construction.

Continue the service road adjacent to eastbound I-84 to connect to the proposed extension of Redstone Road with an at-grade intersection.

- Retaining walls may be required to minimize the impacts to private property which contain commercial and residential developments, and to allow for an at-grade connection to the extension of Redstone Road.

Extend existing Redstone Road to intersect with the proposed service road from the I-84 eastbound exit 62, and continue Redstone Road over I-84 and the westbound frontage roads with a new overpass. On the west side of the overpass an on-ramp to I-84 westbound is also proposed from an at-grade intersection with Redstone Road.

- The extension of Redstone Road will impact existing commercial and residential developments.

- The terrain between the end of the current Redstone Road and the proposed at-grade intersection with the exit 62 eastbound connector and the proposed I-84 overpass will require the Redstone Road extension to have a steep grade. Retaining walls will be required to minimize the impacts to private property which contain commercial and residential developments.
- The proposed structure spanning I-84 and the proposed service lanes and reconfigured exit 62 westbound off-ramp will require traffic shifts on I-84 for the erection of temporary supports and for the realignment of the I-84 westbound off-ramp at exit 62. Temporary lane closures will be required for the erection of the superstructure. This structure should be constructed prior to another proposed improvement to construct auxiliary lanes in this area by utilizing the shoulders and separator between the HOV and through lanes of I-84.
- The elevation of the terrain north of I-84, where the extension of Redstone Road is proposed, is higher than the travel lanes on I-84 by forty (40) feet at the highest point. The high point elevation matches the elevation of the mall ring-road at the intersection with the Wal-Mart driveway. A balance must be achieved during the design process to obtain suitable grades on the proposed roadways, while meeting the critical touchdown points on the existing roadways.

Redstone Road continues to Buckland Hills Drive between the ring-road at "The Shops at Buckland Hills and Wal-Mart. Potential solutions to connect the retail parcels with Redstone Road include at-grade intersections, ramps to access elevated roadways and combinations of various design elements.

- Any construction activity that impacts the retail establishments should be coordinated with the management companies. Major disruption to circulation roadways should be done during non-peak shopping periods.
- Construction activity in the vicinity of Buckland Hills Drive is adjacent to a residential neighborhood that has been identified as a noise sensitive receptor. Construction activity would be subject to the limitations of the local noise ordinance and the Federal Highway Administration's Noise Abatement Criteria.
- An existing pedestrian/bicycle walkway connects Buckland Hills Drive with the pedestrian walkways inside the retail area. The design plans for the extension of Redstone Road to Buckland Hills Drive should maintain or improve pedestrian and bicycle access through the area.
- The most direct connection (as shown on schematic drawings in this report) will impact one or more of the restaurant parking areas (Red Robin & Smokey Bones) between the mall ring-road and Buckland Hills Drive.
- Bus Routes in this area will be impacted by the proposed extension of Redstone Road and construction must be reviewed and coordinated with CT Transit.

<u>Retail Connections from Buckland Hills Drive</u>

- If Redstone Road is extended to a signalized intersection with Buckland Hills Drive with improvements on Buckland Hills Drive to the Wal-Mart entrance to

the north and the entrance to The Shops at Buckland Hills to the south, impacts to the retail space can be substantially reduced.

- The Redstone Road extension will cross just north of the intersection of the mall ring-road with the connection driveway to Wal-Mart. The elevations and alignments of existing and proposed roadways will require changes to the current roadway configuration. Alternatives will be identified during the preliminary design (including elimination of the inter-connection between The Shops at Buckland Hills and Wal-Mart) and should be discussed with all stakeholders.

Redstone Road Connections with Existing Retail Circulation Roadways

- If Redstone Road is constructed over (or under) the existing connection between The Shops at Buckland Hills and Wal-Mart, connections to Redstone Road from the roadways within the retail area may be considered. Connecting ramps will have greater impacts on the retail parcels because of the land needed for the construction of the connecting ramps.

In conjunction with the improvements at Redstone Road, Study Priority #1 includes changing the location of where vehicles access I-291 westbound from I-84 westbound. The existing I-84 westbound ramp to I-291 will be closed and I-291 traffic will be directed to take westbound exit 62 (Westbound Frontage Road). A connection will be made from the Westbound Frontage Road to I-291 westbound.

- The design will need to address potential impacts to existing lighting and overhead sign supports at the new exit for I-291, as well as at the connection from the westbound frontage road to the ramp for I-291.
- The design will need to address potential impacts to existing storm drainage at the proposed connection from the westbound frontage road to the ramp for I-291.
- The proposed connection between the westbound frontage road and the I-291 on-ramp will require traffic shifts on I-84 and the westbound frontage roads. Temporary closures of the westbound frontage road and the I-291 on-ramp from westbound I-84 will also be necessary during the transition from the existing to the proposed access to I-291.
- The proposed improvement is within the limits of an Aquifer Protection Area, as shown in Figure 4-1C of the Technical Memorandum No. 1-Existing and Future Conditions Report, dated November 2, 2006.

2.2.1.2 Access Improvement at I-84 WB off-ramp, exit 63

A new off-ramp from I-84 westbound will be provided for traffic exiting to travel northbound on Route 30 (Deming Street). The ramp will merge onto Route 30 between I-84 and McIntosh Drive. Access to McIntosh Drive will be considered during the preliminary design phase.

- Construction activity in the vicinity of McIntosh Drive, a residential neighborhood, which has been identified as a noise sensitive receptor. This project would be subject to the limitations of the local noise ordinance and the Federal Highway Administration's Noise Abatement Criteria.
- Access to McIntosh Drive during and after construction of the westbound off-ramp from I-84 to Route 30 northbound needs to be investigated during the preliminary engineering phases of the project and discussed with the stakeholders.

Note: Figure 4-5B (Noise Sensitive Receptors) of the Technical Memorandum No. 1-Existing and Future Conditions Report dated November 2, 2006 does not identify the McIntosh Drive Neighborhood as a residential neighborhood.

- Traffic shifts on I-84 westbound and on Route 30 (Deming Street) northbound will be required to separate the work zone from the existing travel lanes.

The existing I-84 westbound off-ramp to northbound/southbound Route 30 (Deming Street) will be converted to an exit ramp for traffic traveling southbound (only) on Route 30 (Deming Street). This will be achieved through modifications to the ramp and signal configuration where it meets with Route 30.

- Traffic shifts on the existing I-84 westbound off-ramp at exit 63 and on Route 30 (Deming Street) southbound will be required to separate the work zone from the existing travel lanes.
- The proposed improvements fall within the zone of potential Critical Habitats as shown in Figure 4-3B of the Technical Memorandum No. 1-Existing and Future Conditions Report, dated November 2, 2006. The proposed alignment passes through a natural diversity database area. The Natural Diversity Data Base has records of species listed by the State, pursuant to section 26-306 of the Connecticut General Statutes, as endangered, threatened or special concern in the project area. The DEP Wildlife Division should be consulted during future planning and design for the project; they will assess potential impacts to listed species and provide recommendations to avoid or minimize impacts.

2.2.1.3 Transit Center and HOV ramps

Improved access to the proposed transit center which is to be located in the commuter parking lot between I-84, Buckland Street and Pleasant Valley Road has three potential improvements. The main element of this improvement will provide a direct connection with the existing HOV lanes on I-84 through the construction of a fly-over ramp from the HOV Lanes to the existing access ramp for Pleasant Valley Road and the westbound frontage road. The existing HOV off-ramp to Buckland Street will be eliminated as part of this improvement.

Construct a new merge with westbound HOV from the proposed flyover and construct a new exit from eastbound HOV to the proposed flyover.

- The construction of the proposed HOV connections will require traffic shifts on I-84 and the HOV lanes in both the eastbound and westbound directions. Temporary closures of the HOV on-ramp and off-ramp at Buckland Street will be necessary to construct the proposed connections.
- Sign supports, catch basins and other storm drainage structures must be reviewed during the design of the auxiliary lanes.
- These improvements are located within the limits of an Aquifer Protection Area. The construction of these improvements should comply with the Best Management Practices (BMPs) recommended by the Town of Manchester/CTDEP.

Construct a new structure over westbound I-84 and the westbound frontage road.

- The construction of the proposed fly-over structure for the HOV connections will require traffic shifts on I-84 and the HOV lanes in both the eastbound and westbound directions. Temporary closures of the HOV on-ramp and off-ramp at Buckland Street will be necessary.
- Erection of the bridge superstructure over I-84 westbound will require temporary lane closures, with the potential for mandatory nighttime construction.
- These improvements are located within the limits of an Aquifer Protection Area. The construction of these improvements should comply with the Best Management Practices (BMPs) recommended by the Town of Manchester/CTDEP.

Widen the existing connection roadway between Pleasant Valley Road and the Westbound Frontage Road entrance and exit for new connection to the I-84 HOV lanes.

Close the existing HOV on/off ramp with Buckland Street.

- The construction associated with the closure of the existing HOV exit to Buckland Street will require traffic shifts on the I-84 HOV lanes in both the eastbound and westbound directions.

2.2.2 Study Priority Improvements

2.2.2.1 Auxiliary Lanes between Exits 62 & 63

Utilizing the existing right-of-way, auxiliary lanes between exit 62 and exit 63 can be constructed by reallocation of the space available for travel lanes, shoulders and the separator between the HOV lanes and the main traffic lanes. Service lanes that were proposed between Exit 63 and Exit 64 were removed from a proposed project and can be combined into a single project to provide auxiliary lanes between exit 62 and exit 64.

- The construction of the proposed auxiliary lanes will require traffic shifts on I-84 and the HOV lanes in both the eastbound and westbound directions. Temporary closures of on-ramps and off-ramps will also be necessary during the transitions between various stages of construction.
- Sign supports, catch basins and other storm drainage structures must be reviewed during the design of the service lanes.
- Elimination of the drainage swale between the HOV and other travel lanes will require a new gutter flow analysis for the conditions during construction and for the final roadway cross-section to ensure flooding will not occur during the design storm event.
- Residential areas, which have been identified as noise sensitive receptors, are located adjacent to the highway right-of-way. This project would be subject to the limitations of the local noise ordinance and the Federal Highway Administration's Noise Abatement Criteria.

2.2.2.2 Single Point Urban Interchange (SPUI) at the intersection of Buckland Street, Pleasant Valley Road and Buckland Hills Drive

The third element of the improvements associated with the transit center is the creation of a Single Point Urban Interchange (SPUI) at the intersection of Buckland Street, Pleasant Valley Road and Buckland Hills Drive. The bridge on Pleasant Valley Road will carry through traffic over Buckland Street and a single, three-phase signal will control the movement of traffic on Buckland Street and ramps to-and-from the bridge.

The Advisory Committee decided to assess the feasibility of a SPUI in the future depending upon the need for further improvements.

- Impacts to existing sidewalk and bicycle paths
- Unstable rock on both sides of Buckland Hills Drive that has been stabilized through mechanical rods and other methods.
- This southern approach of this improvement is located within limit of an Aquifer Protection Area. The construction of these improvements should comply with the Best Management Practices (BMPs) recommended by the Town of Manchester/CTDEP

2.2.2.3 Realignment of Pleasant Valley Road at the connection to the Frontage Road to I-84 westbound, with a connection to the proposed Transportation Center

Provide a connection to the proposed transit center by realigning the intersection of Pleasant Valley Road and the connector to the Frontage Road to I-84 westbound to form a four-way intersection. The fourth leg of the intersection will serve as the access to the future transit center.

- Relocation of the intersection will have a substantial impact on the two existing eating establishments that are currently located at the intersection of the connector at Pleasant Valley Road.
- Utilities and utility easements may need to be relocated if Pleasant Valley Road is realigned outside its current right of way.
- The existing traffic signal, drainage, signage and entrances to adjacent retail shops will have to be addressed during the new intersection design.
- These improvements are located within the limits of an Aquifer Protection Area. The construction of these improvements should comply with the Best Management Practices (BMPs) recommended by the Town of Manchester/CTDEP.

2.2.2.4 Connection from Pleasant Valley Road to Evergreen Walk

Provide a connection from Pleasant Valley Road to the Evergreen Walk shopping plaza.

- The proposed alignment passes through a natural diversity database area. The Natural Diversity Data Base has records of species listed by the State, pursuant to section 26-306 of the Connecticut General Statutes, as endangered, threatened or special concern in the project area. The DEP Wildlife Division should be consulted during future planning and design for the project; they will assess potential impacts to listed species and provide recommendations to avoid or minimize impacts.
- Creation of this connection will impact commercial and residential properties identified in Appendix E.
- Since Smith Street is proposed as an underpass, the vertical profile of Smith Street will need to be adjusted to accommodate the vertical geometry of proposed bridge connecting Pleasant Valley Road and Evergreen Walk.

2.2.3 Transportation Management Plan

The need for continued corridor mobility must be considered during the planning process of major transportation reconstruction activities. Work zones have the potential to affect not only the point specific facility under construction, but also the overall corridor mobility miles away from the actual construction. Additionally, major construction activities having significant work zone activity can also affect other modes of transportation in the corridor. The purpose of a proper work zone is to minimize conflict between the traveling public and the workers and to mitigate (to the extent possible) congestion in and around the work zone. A proper Transportation Management Plan (TMP) and implementation strategy will go a long way towards minimizing any disruption to corridor mobility for all modes of travel in the corridor.

Anticipated work zone impacts of the proposed roadway improvements need to be assessed and managed through the TMP process. TMP implementation of strategies

should include transportation operations components as well as public outreach and information components for the ultimate success of significant projects.

Information on the Rule on Work Zone Safety and Mobility can be found on the Federal Highway Administration (FHWA) web site (http://www.fhwa.dot.gov/ workzones). Other sources for information on planning for safety, mobility and constructability include the American Traffic Safety Services Association (ATSSA) (http://www.atssa.com) and the National Work Zone Safety Information Clearinghouse (http://www.workzonesafety.org**).**

Activities being proposed by this study that have the greatest potential to affect corridor mobility include all work on and/or over I-84 and I-291. Specifically, work that will require the constriction of normal width travel lanes, the shifting of travel lanes and the temporary closure of one or more lanes for short period of time. The most significant impact to corridor mobility may be the potential for temporary (off peak) closure of all eastbound or westbound lanes of I-84 in order to erect the bridge components associated with the Redstone Road Extension and the HOV fly-over ramps to the new Transportation Center. Temporary closing of the highway would be limited to one direction at a time only. TMP strategies to mitigate the anticipated mobility impacts that may be associated with various recommended transportation priorities include:

- Comprehensive Public Awareness Program;
- Agency coordination and interim measures to support temporary mode shift;
- Temporary Intelligent Transportation Systems (ITS);
- Highway traffic camera monitoring;
- Police & tow truck standby;
- Variable message signs (potentially statewide), and
- Use of crashworthy channelizers, signs, barricades, barriers, etc.

It is anticipated that the scope of operations and the duration of temporary closings will not result in this project being classified as significant. The specific strategies for implementation should be selected as the planning and design phases progress as described by the "Final Rule on Work Zone Safety and Mobility."

2.3 Construction Cost Estimates

The preliminary construction cost estimates are prepared for the recommended improvements. The CTDOT cost estimation guidelines for the year 2008 are applicable. The study team assumed 10% rate of inflation to estimate costs for the year 2015 and 5% rate of inflation to estimate costs for the year 2025.

Since the plan improvements are still at a conceptual stage, a few pay items are estimated as a percentage of total sum of other items that could be quantified. As the level of

design advances the monies required for each individual project can be more accurately computed based on the better definition and understanding of various project elements such as earthwork, right of way acquisition, and environmental mitigation.

The pay items were identified based on CTDOT cost estimation guidelines. Mobilization is assumed at 10% for all estimates. Mobilization covers contractor costs such as hiring staff/sub-contractors, equipment and preparation of site. In addition, the study team assigned reasonable costs for stage construction, noise barriers (if warranted), environmental mitigation and incident management system for each project. Please refer to Appendix F for further details.

The following Table 2-2 shows estimated costs for each of the recommended improvements.

TABLE 2-2: ESTIMATED CONSTRUCTION COSTS

Type of Improvement	Estimated Costs		
	(2008 dollars)	(2015 dollars)	(2025 dollars)
Roadway Improvements			
Redstone Road Extension	$133,600,000	$260,348,605	$424,080,443
Ramp to I-291	$3,400,000	$6,625,638	$10,792,466
Improvements to Exit 63	$29,500,000	$57,487,154	$93,640,517
HOV Ramps	$49,800,000	$97,046,112	$158,077,890
Auxiliary lanes between Exits 62 and 63	$29,000,000	$56,512,796	$92,053,390
Single Point Urban Interchange	$36,200,000	$70,543,559	$114,908,024
Realignment of Pleasant Valley Road	$7,000,000	$13,641,020	$22,219,784
Connection from Pleasant Valley Road to Evergreen Walk	Not Estimated		
TSM/TDM Improvements	Not Estimated		
Transit Improvements			
Circulator Shuttle Bus (Assume 2 new shuttle buses)	$400,000 [1]	$779,487	$1,269,702
Increase Service Frequency (Assume 8 new buses)	$2,160,000 [2]	$4,209,229	$6,856,390
Modify Existing Bus Signage (Assume 20 signs)	$4,000 [3]	$7,795	$12,697
Bus Shelters (Assume 9 new shelters)	$90,000 [4]	$175,385	$285,683
Intelligent Transportation Systems	$200,000 [5]	$389,743	$634,851
Replace Radio System	$125,000 [6]	$243,590	$396,782
Acquire Alternate Fuel Vehicles ($295,000-$385,000) [7]	$340,000	$662,564	$1,079,247
Multi-modal Transportation Center	$12,300,000 [8]	$23,969,220	$39,043,334
Bike/Ped Improvements	$5,430,931	$10,583,348	$17,239,158

1. Seated capacity of 24-33 passengers. Assumes average cost of $200,000/vehicle.
2. Assumes average cost of $270,000/bus.
3. Assumes $200 per sign and pole.
4. Assumes 9 shelters at $10,000/shelter.
5. Assumes $5,000 per bus for GPS/AVL technology and $6,000 per shelter for VMS signs. Does not include central communication center cost.
6. Assumes $5,000 per bus.
7. Source: www.cleanairnet.org. Cost given per bus for 40-seat bus. Low end of range represents CNG bus and high end of range is hybrid electric.
8. Cost includes 500 structured parking spaces.

Please refer to Section 1 of this report for a detailed description of proposed improvements. Please refer to Subsection 2.6 of this report for the proposed implementation of plan.

2.4 Operations/Maintenance Cost Estimates (Transit Alternatives)

The operations/maintenance (O&M) cost estimates were prepared for the recommended improvements based on the data obtained from National Transit Database maintained by the Federal Transit Administration (FTA). Please refer to Appendix G for further information.

The study team extracted the data related to funding, operations/maintenance costs and the fleet size of Connecticut Transit-Hartford Division. The following Figure 2-1 shows the comparison of total funding and O&M expenses from the year 1991 to 2007. The chart also shows the fleet size of Connecticut Transit-Hartford Division.

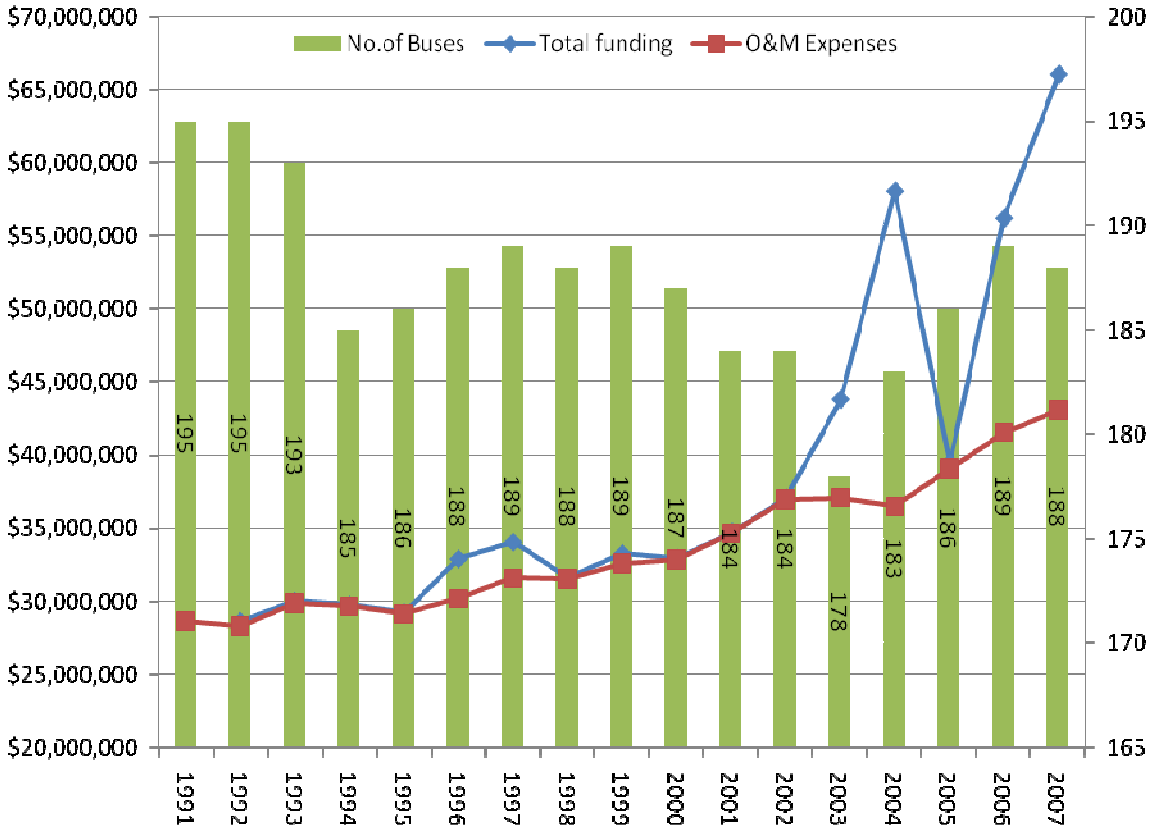

FIGURE 2-1- COMPARISON OF TOTAL FUNDING AND O&M EXPENSES OF CONNECTICUT TRANSIT-HARTFORD DIVISION

The Capital Region Transportation Plan estimates that $919,000,000 will be needed over the next 20 years for the maintenance of the existing fleet of Connecticut Transit buses. However, the estimate does not include any funds to cover the costs towards any additional services.

In order to increase the service frequency, the transit buses will have to travel additional miles. The following Table 2-3 shows the anticipated additional bus miles.

TABLE 2-3: ADDITIONAL ANNUAL BUS MILES

CT Route	Weekday	Saturday	Sunday	Total
B3 Buckland Mall	63,180	6,552	0	69,732
B4 Buckland Mall	14	6,552	0	6,566
L/92 Tower Avenue Crosstown	96,720	18,096	13,728	128,544
X/91 Forbes Street Crosstown	70,200	13,104	9,828	93,132
Tolland Turnpike Buckland Hills, Rockville	29,640	29,640	18,772	78,052
Tolland Turnpike Buckland Hills	0	14,040	8,892	22,932
Buckland Flyer	-4160	0	0	-4160
Buckland Express	0	0	0	0
Sub Total	255,594	87,984	51,220	394,798
Circulator Shuttle Bus	56,160	11,232	11,232	78,624
Grand Total	317,754	99,216	62,452	473,422

Note: Does not include BRT service.

The study teams' research found that FTA's Annual National Transit Summary and Trends (NTST) report is the most reliable and comprehensive source for information related to transit operations. As per their report for the year 2007, the nationwide average O&M cost for the bus transit services was $8.70 per annual revenue mile (Appendix G). The 2008 average O&M cost, based upon a 10% unit cost increase by the study team, is $9.57 per annual revenue mile.

The study team, because of suggested improvements, estimates that buses will run an extra 473,422 revenue miles in one year. The estimated O&M expenses are equal to:

$$473,422 \text{ X } \$9.57 = \$4,530,649$$

2.5 Environmental Summary

The following Table 2-4 summarizes environmental impacts associated with proposed transportation improvement options. Please refer to Technical Memorandum No. 2 for further information.

TABLE 2-4
SUMMARY COMPARISON OF ANTICIPATED ENVIRONMENTAL IMPACTS ASSOCIATED WITH PROPOSED TRANSPORTATION IMPROVEMENT OPTIONS

RESOURCES	TRANSPORTATION IMPROVEMENT OPTIONS		
	Option 2	Option 3	Option 10
Land Use and Zoning	Medium	Low/Medium	Medium
Surface Water Resources	Low	Medium	Medium
Wild and Scenic Rivers	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated
Groundwater Resources	Low	Low	Low
Wetlands	Low/Medium	Medium	Medium
Floodplains and Stream Channel Encroachment Lines	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated
Threatened and Endangered Species/Critical Wildlife Habitat	Medium	Medium/High	Medium/High
Farmlands	Low	Low	Low
Air Quality	Low	Low	Low
Hazardous Waste Sites	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated
Noise Sensitive Areas	Medium	Medium	Medium
Community Resources	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated
Cultural Resources	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated
Section 4(f) Resources	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated
Section 6(f) Resources	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated
Environmental Justice	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated	No Adverse Impacts Anticipated

The preliminary delineation of the Aquifer Protection Area (APA) was depicted in Figure 4-1C of Technical Memorandum No. 1 published in November 2006. However, the mapping for the wellfield has been completed in October 2008, but has not yet been adopted by the Town of Manchester. Please refer to Appendix H for depiction of the final APA boundary and draft guidelines for road and highway construction/reconstruction in state Aquifer Protection Areas.

Since the proposed multi-modal transit center is now located within APA, any kind of fueling and maintenance activities are not recommended in its premises.

2.6 Implementation Plan

This section presents a schedule for implementing recommendations of the Buckland Transportation Study. The study team classified roadway improvements that would have the greatest benefit towards improving transportation safety and mobility at the most critical locations in the study area as high priority improvements. The rest of the roadway improvements were classified as priority improvements. The study team identified TSM/TDM, transit and bike/ped improvements as high priority improvements to be implemented as and when funds are available.

The study high priority roadway improvements are:

- Although, not part of the Buckland Transportation Study, improvements to the intersection of Oakland Street, Tolland Turnpike (Route 30) and the I-84 eastbound ramps are currently being designed by CTDOT.

- Redstone Road extension over I-84 and new slip ramp to northbound I-291 from existing westbound frontage road.

- Additional I-84 WB westbound off ramp at exit 63 Route 30.

- HOV ramps and multi-modal transportation center.

The study priority roadway improvements are:

- Single Point Urban Interchange (SPUI) at the intersection of Pleasant Valley Road, Buckland Street and Buckland Hills Drive.

- Improvements to the intersection of Pleasant Valley Road and the I-84 ramps.

- Auxiliary lanes along I-84 between exits 62 and 63.

- Connection from Pleasant Valley Road to Evergreen Walk.

2.7 Findings of Land Use Study

A basic finding was that land use management can be expected to have limited impact on overall traffic volumes on congested major roadways in communities where strong growth is continuing. New growth equals new person-trips. However, land use management techniques can complement other congestion mitigation efforts by creating a critical mass of mixed-use and more options for travel. The result may be to shift some person-trips to other modes than the automobile with some shift also to multi-purpose trips, reducing VMT overall.

The greatest potential impact from best land use management strategies for Buckland may be reduction of internal automobile trips within the study area to offset current conditions where people are now making multiple short trips amongst retail and services destinations.

A pattern of mixed-use concentrated activity nodes within the Buckland study area in an organized pattern relative to one another can achieve car-trip reductions much more effectively than a random general increase in density and mix. That is, the Buckland region's form of development can influence vehicle trips to a greater extent than simply changing current zones to offer the option of mixed-use development at high densities.

3 – Financial Plan

The purpose of the financial plan is to identify funding options that would be likely sources of money to advance recommendations made by this study.

The Capitol Region Transportation Plan- A guide for transportation investments through the year 2035, adopted by CRCOG Policy Board on April 25, 2007, outlines a comprehensive program for improving the transportation system to meet travel needs through the year 2035. The estimated capital cost of implementing the Plan is about $1,659,000,000. The transit program represents about 65%; the highway program represents about 33% and the bicycle/pedestrian facilities about 2% of the total cost. The plan estimates that the unfunded highway needs exceed over $715,000,000 not including the proposals here in.

The financial plan was prepared in conjunction with the Technical Working Group. Refer to Table 3-1: Funding and Implementation Plan.

3.1 Funding of Typical Transportation Programs

There are seldom enough funds available to meet all the transportation needs. CRCOG, being a regional planning agency, sets priorities for the region to guide the decision making process about choices and compromises.

Any project typically develops through a number of distinct phases from conception to completion. Once a project is determined to be beneficial for the community it is included on the Transportation Improvement Program (TIP). This inclusion guarantees that sufficient funds are available to undertake detailed environmental evaluations and engineering design. After completion of environmental evaluations and engineering design right-of-way is purchased and utilities are relocated. The final phase is the construction of the project. However, not all the projects in the TIP reach the final stage and sometimes the projects that do progress further, ultimately may cost more than originally expected or may get delayed due to complications with permits or property acquisition, etc. Therefore, the TIP program is amended periodically to reflect updated status of various projects.

Since there is such a big disparity between funds available and funds required for various transportation programs there is stiff competition for available funds. Sometimes projects are only partially funded or sometimes they do not receive any funding at all. These projects may still progress, if funding is made available through new/innovative sources of revenue. Since the benefits of majority of big projects are of regional nature, sometimes the local municipalities/counties, who are the beneficiaries of this project, may pool their resources in order to fund a project. Elected officials can also augment funding of projects through earmarks, federal/state appropriations.

3.2 Existing Revenue Sources

Depending on the nature of the transportation facility, CRCOG funds projects by the combination of federal, state, county or municipality tax dollars.

As per CROCG's Capital Region Transportation Plan, the estimated revenues for the next 20 years will total about $1,685,000,000. These funds are to be used for system improvements and enhancements only.

3.3 Available Grant Programs

3.3.1 Federal Programs

In August 2005, the U.S. Congress passed a new transportation funding bill known as the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETY-LU). The majority of funds, 75% go to highways; 18.5% go to transit; and approximately 6% go to primary safety projects.

The Federal Enhancement Program was reauthorized with $42 million in grants over five years available nationwide to public agencies and nonprofit organizations. The purpose of the transportation program is to fund projects that allow communities to strengthen the local economy, improve the quality of life, enhance travel experience for people traveling by all modes and, protect the environment.

3.3.2 State Programs

The Motor Vehicle Fuel Tax and Motor Vehicle Excise Tax are the two major state revenues sources for highway maintenance and arterial construction funds.

3.4 Potential Revenue Sources

3.4.1 State and Federal Funding Programs

Primarily, revenue sources for further environmental documentation, engineering design and construction of the various components of the preferred improvements will come from state and federal transportation sources. Significant proposals such as the new Redstone Road Extension with frontage road ramp connections, the new westbound I-84 off ramp to Route 30, the operational lanes added to both directions of I-84 between exits 62, 63, and 64 and various major transit proposals will require a major, multi year commitment of state and federal funds. Other smaller proposals such as minor intersection improvements, bicycle and pedestrian improvements may be progressed with a combination of local municipal monies and private investment by land developers.

Potential State and Federal funding sources would include but not be limited to the following:

- Surface Transportation Program
- State Enhancement Funds
- National Highway System Funds
- Interstate Maintenance Funds
- FHWA Non-Discretionary Congestion Mitigation and Air Quality Program (CMAQ)
- FHWA Non-Discretionary Regional Surface Transportation Program (RSTP)
- FTA Small Starts
- FTA Formula Program: 5307 (Urbanized Area Formula)
- FTA Formula Program: 5310 (Elderly and Persons with Disabilities Program)

Other federal programs include programs such as Regional Transportation Enhancements, Highway Bridge Replacement and Rehabilitation, Homeland Security Grants, Bus Preferential Signal Systems, Highway Earmarks, Hazard Elimination Safety, and Railroad Highway Grade Crossing Protection.

3.4.2 Innovative Financing

The following section describes some of the funding sources that can be tapped in order to secure funds for implementing improvements in the study area.

3.4.2.1 Tax Increment Financing (TIF)

TIF has been used for redevelopment and community improvement projects in the United States for many years. With very stiff competition from other municipalities for the scarce federal and state funds, increasing number of municipalities are using TIF mechanism to finance new projects. TIF facilitates use of future gains in taxes to finance the current improvements that would create those gains. TIF creates funding for public projects that may otherwise be unaffordable to localities.

3.4.2.2 Transportation Impact Fees

Continued development warrants improvements to the transportation infrastructure. Transportation impact fees are onetime charges assessed by local governments to the additional traffic generated by the new development. These fees are determined by calculating anticipated infrastructure improvements based on the projected traffic.

3.4.2.3 Public Private Partnerships

As per FHWA, public-private partnerships (PPP) refer to contractual agreements formed between a public agency and private sector entity that allow for greater private sector participation in the delivery of transportation projects. Traditionally, private sector participation has been limited to separate planning, design or construction contracts on a fee for service basis – based on the public agency's specifications. Expanding the private sector role allows the public agencies to tap private sector technical, management and financial resources in new ways to achieve certain public agency objectives such as greater cost and schedule certainty, supplementing in-house staff, innovative technology applications, specialized expertise or access to private capital.

The private partner can expand its business opportunities in return for assuming the new or expanded responsibilities and risks. The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) provides an alternative to grants as a way of doing business, allowing private partners to share with the government the risk and rewards of infrastructure investment, thereby providing transportation, creating jobs and contributing to economic growth.

The Denver International Airport, Denver, Colorado; 21st Century Waterfront Plan in Chattanooga; Tennessee, and SR 125 South Toll Road in San Diego, California are some of the examples where mutually beneficial partnerships between public and private entities made these projects possible.

3.4.2.4 Special Tax Districts

Special tax districts can issue bonds for funding various civic improvement projects in the district. These bonds are paid to borrowers by a tax levied on the district property. Since the tax district is obligated to pay the debt even if project costs and tax collection rates may vary over time, the amount of tax can change over time to accommodate higher or lower project costs and/or tax collection rates.

The Georgetown Special Tax District in the Town of Redding is one such example of such special tax districts in the state of Connecticut.

TABLE 3-1: FUNDING AND IMPLEMENTATION PLAN

High Priority Recommended Improvements	Potential Funding Sources
Redstone Road Extension Combined with Reconfigured Westbound Frontage Road Ramp to I-291	Federal/State
I-84 EB, Exit 63 Off Ramp and Intersection of Rte. 30 Reconstruction (currently funded and in design phase)	Federal/State
Construct Multi-modal Transportation Center, Reloc. HOV Ramps to Trans. Center in Support of Future BRT to Hartford	Federal/State
Priority Recommended Improvements	
TSM/TDM Improvements	
Implement Access Management Controls on Rte. 30 between I-84 WB ramps and Deming Street	State/Local
Re-align Deming Street with Oakland Street	State/Local
Install Corridor Way-finding Signage	State/Local
Coordinate Traffic Signal Timing on Arterial and Collector Streets	State/Local
Provide Corridor Location ID Signage to Assist in Pinpointing Location of the Incidence	State
Install Incident Management Systems to Better Utilize the Existing Infrastructure	Federal/State
TRANSIT Improvments	
Improve Bus Stop Signage and Shelters	State
Provide Circulator Shuttle Bus Service	State/Local/Private
Implement Intelligent Transportation Systems to Promote Transit Ridership	Federal/State
Provide Bus Rapid Transit to Manchester and Vernon	Federal/State
BIKE/PED Improvements	
Complete Sidewalks on All Local Streets as Identified	State/Local/Private
Provide Exclusive Bike Lanes on Roads as Identified	State/Local/Private
Provide Crosswalks and Pedestrian Signals at Identified Intersections	State/Local/Private
Provide Bike Station within Multi-modal Transportation Center	Federal/State
Provide Weather Protected Bike Shelters at Various Locations as Identified	Local/Private
ROADWAY Improvements	
Construct Single Point Urban Interchange (SPUI) at Intersection of Buckland St., Pleasant Valley Rd. and Buckland Hills Dr.	Federal/State
Provide Auxilary Lanes Along I-84 EB & WB Between Interchanges 62, 63 and 64	Federal/State
Realignment of Pleasant Valley Road with I-84 Ramps and Entrance to Transit Center	Federal/State
Provide Connection from Pleasant Valley Road to Evergreen Walk	Local/Private

Appendix A
References Cited

Capitol Region Transportation Plan- A guide for Transportation Investments through the year 2035. Capitol Region Council of Governments, April 25, 2005.

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PT (2000), "What is the Average Price to Park in Major U.S. Metropolitan Areas," *Parking Today* (www.parkingtoday.com), October 2000

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Southern California Association of Governments. 2008 Regional Transportation Plan

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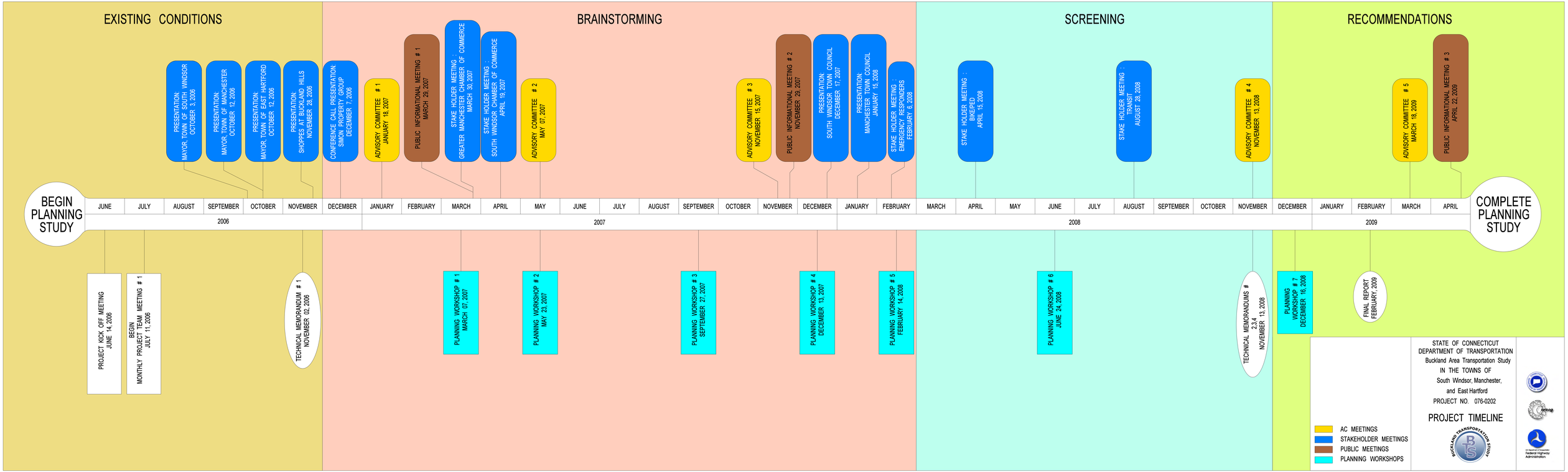
Appendix B
Project Timeline


EXISTING CONDITIONS
BRAINSTORMING
SCREENING
RECOMMENDATIONS
PRESENTATION: MAYOR TOWN OF SOUTH WINDSOR OCTOBER 3, 2006
PRESENTATION: MAYOR TOWN OF MANCHESTER OCTOBER 12, 2006
PRESENTATION: MAYOR TOWN OF EAST HARTFORD OCTOBER 12, 2006
PRESENTATION: SHOPPES AT BUCKLAND HILLS NOVEMBER 28, 2006
CONFERENCE CALL PRESENTATION: SIMON PROPERTY GROUP DECEMBER 7, 2006
ADVISORY COMMITTEE # 1 JANUARY 18, 2007
PUBLIC INFORMATIONAL MEETING # 1 MARCH 29, 2007
STAKE HOLDER MEETING : GREATER MANCHESTER CHAMBER OF COMMERCE MARCH 30, 2007
STAKE HOLDER MEETING : SOUTH WINDSOR CHAMBER OF COMMERCE APRIL 19, 2007
ADVISORY COMMITTEE # 2 MAY 07, 2007
ADVISORY COMMITTEE # 3 NOVEMBER 15, 2007
PUBLIC INFORMATIONAL MEETING # 2 NOVEMBER 29, 2007
PRESENTATION: SOUTH WINDSOR TOWN COUNCIL DECEMBER 17, 2007
PRESENTATION: MANCHESTER TOWN COUNCIL JANUARY 15, 2008
STAKE HOLDER MEETING : EMERGENCY RESPONDERS FEBRUARY 6, 2008
STAKE HOLDER MEETING : BIKE/PED APRIL 15, 2008
STAKE HOLDER MEETING : TRANSIT AUGUST 28, 2008
ADVISORY COMMITTEE # 4 NOVEMBER 13, 2008
ADVISORY COMMITTEE # 5 MARCH 19, 2009
PUBLIC INFORMATIONAL MEETING # 3 APRIL 22, 2009
BEGIN PLANNING STUDY
COMPLETE PLANNING STUDY
JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL
2006
2007
2008
2009
PROJECT KICK OFF MEETING JUNE 14, 2006
BEGIN MONTHLY PROJECT TEAM MEETING # 1 JULY 11, 2006
TECHNICAL MEMORANDUM # 1 NOVEMBER 02, 2006
PLANNING WORKSHOP # 1 MARCH 07, 2007
PLANNING WORKSHOP # 2 MAY 23, 2007
PLANNING WORKSHOP # 3 SEPTEMBER 27, 2007
PLANNING WORKSHOP # 4 DECEMBER 13, 2007
PLANNING WORKSHOP # 5 FEBRUARY 14, 2008
PLANNING WORKSHOP # 6 JUNE 24, 2008
TECHNICAL MEMORANDUMS # 2,3,4 NOVEMBER 13, 2008
PLANNING WORKSHOP # 7 DECEMBER 16, 2008
FINAL REPORT FEBRUARY, 2009
AC MEETINGS
STAKEHOLDER MEETINGS
PUBLIC MEETINGS
PLANNING WORKSHOPS
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
Buckland Area Transportation Study
IN THE TOWNS OF
South Windsor, Manchester,
and East Hartford
PROJECT NO. 076-0202
PROJECT TIMELINE
BUCKLAND TRANSPORTATION STUDY
Federal Highway Administration

Appendix C
Public Comments

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Jacobs, George

From: formmailer@secureserver.net
Sent: Monday, January 05, 2009 1:27 PM
To: info@bucklandstudy.org
Subject: bucklandstudy.org-Buckland Transportation Study

01title:
02fname: Bill
03lname: Rotavera
04company:
05address1: 17 Diggins Court
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: billtank@safe-t-tank.com
11comments: I didn't know if you were aware but Wal-Mart is considering building a Super Wal-Mart behind Jo-Ann Fabrics off Pleasant Valley Road. As a resident of this area my wife and I are interested in this proposal not going any farther as the traffic in the area is bad enough at this time. Have you heard about this and will you comment on this at a public meeting?
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: Iz184
wsp_key: 2ef63f2071dffd60ae41fa3896674da6

This e-mail was generated from a form submission on your website: bucklandstudy.org at 1/5/2009 11:27:21 AM

Jacobs, George

From: formmailer@secureserver.net
Sent: Monday, August 04, 2008 10:49 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mr.
02fname: Buck
03lname: Honda
04company: n/a
05address1: 227 Main Street
06address2:
07city: East Hartford
08state: CT
09zip: 06118
10email: buckchipshonda1st@hotmail.com
11comments: Buck Chips Honda, I227 Main StreetEast Hartford CT 06118 Dear James R. Andrini, George JacobsDUPDATE:(update, 08/04/080 My hart just fell when I saw that mast arm traffic light poles are replacing the beloved span wire traffic signals. These mast arms really ruined the street scape. 08/06/07 I SEE THAT THEY ARE GOING INSTALL NEW TRAFFIC LIGHTS IN AND AROUND THE BUCKLAND HILLS AREA. CAN YOU TELL ME IF THEY WILL BE SPAN WIRE TYPE(I HOPE)? This is my input on the Buckland Area Transportation Study: 1], Aesthetics, Traffic lights be suspended on span wire(diagonly,and box span wire)with new yellow signals as they are now. Improvements shouldn`t mean the distruction of this state of CT. that I knew,and grew up with, and love.-see below for reasons why. 2], Freeways, build ramps directly into Buckland Hills Mall from I-84 . 3], Straighten out, and extend Slater St. so that it`s connects with Union St, and Main St. 4], Build new exit for Slater St. 5], New Exit from I-291 near Burnham St to connect with the Buckland Mall from the westside of the Mall. 6, More bus service to this area,(esp. express buses)and a free shuttle that takes shoppers the all of the stores, malls, plazas,and move plex in this area,with stops for the for CT Transit buses too. 7], Pedestrians, sidewalks on both sides of all of the roads in,and around this major shopping area,and sidewalks that connect from those sidewalks to the stores form the main roads(provide a safe way to walk to and from the stores without having to cross open areas of paved parking lots) paved pathways to connect to all of the plazas in this area. 8], Bicyles, install bike lanes both on the roads,and provide paved bikeways that interconnect with the shopping centers in this area too. Traffic lights,and their supports---for me at least, it`s all about family-my family,and what I grew up with---This State of Connecticut. Traffic light poles: at one time truss arms were here,and are now completely gone and in their place mast arms. Span wire is the only one here in Hartford that is of Connecticut that I grew up with,and that this is still being used in many new installations too---like what I see. I was a ward of this state of CT from the begining of my life till 18 years of age,and from the start of my life I took a major interests in the states highways, turnpike, freeways, and traffic lights,and their supports---today I`m protecting, defending,and preserving this state of CT that I grew up live,and love, which is dissappearing through the replacement with new disings that do not bear any resemblence of that which is being replaced. I want to forever keep,and use the span wire installations as they say,and remind me of family,and my home---this state of Connecticut,and is what I grew up with,and this is why? As early as my arrival in this world I was transported about by the CT`s Child Welfare Dept.(10-12 months before I became officially a ward of the State-of Connecticut), and was instilled in me upon my first sighting of traffic lights was this-family. The center traffic light (a four way)I referred to as the mother,and the other traffic lights her children,and this became forever etched in my mind--and I will never part with it. The span wire allows the lights to sway in the breeze that at times will sway in unison-like a family should,and other times they sway independently of each other-a true family unit will allow for the individual member to express him/her self for the benefit of both the member of the family,and the family unit as

a whole. To see an example of what I mean is to go to Hudson Street in Hartford,at these two intersections-Capital Avenue,and Hudson st.,and the intersection of Hudson St.,and Buckingham Street---excellent! At night in low,or no light, the traffic lights seem to be suspended in the air with out wires---love this. The traffic lights should be the exclusive residents of the(span) wire,and the (truss)arm, free of clutter of signs,cameras,when I look up to see the light,I shouldn't`t have to look for the light, the light should look for me---some of these mast arms are cluttered with signs,and cameras that they take from the most important thing up there---the traffic light. The span wire, diagonally across a intersection conveys the family unit in its` strongest form,(best at all intersections except for factories, shopping centers,malls,and industrial parks, and the span wire box set up conveys the individual in its` strongest form(best for shopping centers,and industrial park,and factory entrances). In short the span wire installation (for me)says family,and my home too. It hits me like a ton of bricks this past July, 2005, while I was waiting for the bus in front of the Plaza at Burr Corners in Manchester, CT. I`m looking at the traffic lights there supported by span wire diagonally across the intersection with Tolland Turnpike,and the entrance to Plaza at Burr Corners,and that's when it hits me---its` not just family for me the State of Connecticut, but home, my home, my home state Connecticut,and my hometown, Hartford, CT---the direction that I was facing in the early morning hours, just after sunrise, when that hits me,and hits me hard too. I want to forever keep,and use the truss arm installations as they say,and remind me of family,and my home---this state of Connecticut,and is what I grew up with,and this is why? The truss arm(all metal support system) is what I grew up with,and are very appealing to the eyes,as these have class, style, grace,elegance,clean lines,and look very sharp in the downtowns of CT cities. these are part the street scape,as the smaller versions of the truss arms are the truss arms that are used for street lights---it`s only natural. To see what I`m trying to explain here is to go to New Haven`s downtown. The truss arm is best for downtown ares of Connecticut`s cities,and prominent places too.-anything/place that is of the state of Connecticut, i.e. entrance to State Police barracks, State correctional centers, State offices-except for the more popular ones, span wire is favored at entrances to Connecticut State parks,and forests, to keep it more rustic. The mast arm traffic light support system(poles),and why I don`t like them; These are anti family,and VERY ANTI CONNECTICUT, convey images of hate,and oppression,plus the`re just plain ugly. With the signal being hanged from the arm they show images of hate/hanging of the family, and of these too: traffic lights that are hung from the arm that are black in color shows hate ,and predijuce toward Blacks, signals that are yellow shows same towards Asians-(I`m Japanese, American),and traffic lights that are the D.OT. Green color shows same for the States-in this case, the State of Connecticut-my family/parents whom reared me up,and I`m very big on States rights-10th Amendment of the US Constitution. On mast arms with the arm having an upward curve to it is a liken to a tree branch where the signal is hung to me me at least conveys images of hangings of blacks, with a black signal, Asians,with a yellow signal-again I`m Japanese, American, and with a D.O.T. Green signal my family, my parents the State of Connecticut-and I don`t like this at all. ...and that they are of other states, not CT, I left PA because of that. On mast arms with curved arms or not, with the signal being rigidly attached to the arm conveys images of oppression,with blacks ,black signals, of Asians with a yellow signal-again I`m Japanese American, and with a D.O.T. Green signal oppression of the states,and their rights-my family/parents the State of Connecticut I see this oppression in those mast arms,and want these type of traffic light support system/poles done away with for these reasons. The mast arm is also a very ugly looking thing too Really, do you need all of that material(metal) to support traffic lights that are made of plastic?, These are common in other states,and I don`t like em one bit, and to me at least are a very cold looking design,one of ridgedness,isolation,and are very grotest,over bearing,very imposing(drowns out the traffic lights-even with the larger ones-that are used here)ghastly,and really do clutter the street sceane-takes away from everything that is round about it. I`m really praying that this design is not used else where--such as Albany Avenue.(this and any other projects planned,or already underway in Hartford,or any place else for that matter). In short the mast arm,and any variation thereof is anti CT, family design/looks,and conveys messages,and images of oppression,and hate towards family, Asians, and Blacks, and is not stately either---it`s of another state---

not of The State of Connecticut. Note: the color of the traffic light it self(the body/housing of the traffic light/signal)--- State of Connecticut D.O.T. Green,other green, yellow,and black, is NOT the problem here-never was,and never will be---for me at least--it`s the message/image that it(mast arms) may be sending Sincerely, Buck Chips Honda, I
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: 1tL22
wsp_key: eb38a3d3ed8ad5f40eeb2c6f795a4b8a

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Sunday, April 27, 2008 3:44 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mr.
02fname: BUCK
03lname: HONDA
04company: N/A
05address1: 227 MAIN STREET
06address2: APT. # 2
07city: EAST HARTFORD
08state: CT
09zip: 06118-3613
10email: buckchipshonda1st@hotmail.com
11comments: Buck Chips Honda, I227 Main StreetEast Hartford CT 06118 Dear James R. Andrini, George Jacobs, I`m a registered voter at the above address, and I don`t like this-its something one sees on there way to,and from the mall. Judging from the foundation work for the new traffic signal, I see that the bolts are arranged in a cicular patteren. Base what I seen done at other sites, these looked to be those over sized mast arms traffic light signal poles, if so this has really ruined the looks of this area, and I`m not alone, when I show people what it is that I`m talking about-THEY AGRREE WITH ME---THAT THEY ARE HORRIBLE GROTEST, JUST PLAIN UGLY, OVER BEARING, JUST TO NAME A FEW HERE.. DUPDATE: 08/06/07 I SEE THAT THEY ARE GOING INSTALL NEW TRAFFIC LIGHTS IN AND AROUND THE BUCKLAND HILLS AREA. CAN YOU TELL ME IF THEY WILL BE SPAN WIRE TYPE(I HOPE)? This is my input on the Buckland Area Transportation Study: 1], Aesthetics, Traffic lights be suspended on span wire(diagonly,and box span wire)with new yellow signals as they are now. Improvements shouldn`t mean the distruction of this state of CT. that I knew,and grew up with, and love.-see below for reasons why. 2], Freeways, build ramps directly into Buckland Hills Mall from I-84 . 3], Straighten out, and extend Slater St. so that it`s connects with Union St, and Main St. 4], Build new exit for Slater St. 5], New Exit from I-291 near Burnham St to connect with the Buckland Mall from the westside of the Mall. 6, More bus service to this area,(esp. express buses)and a free shuttle that takes shoppers the all of the stores, malls, plazas,and move plex in this area,with stops for the for CT Transit buses too. 7], Pedestrians, sidewalks on both sides of all of the roads in,and around this major shopping area,and sidewalks that connect from those sidewalks to the stores form the main roads(provide a safe way to walk to and from the stores without having to cross open areas of paved parking lots) paved pathways to connect to all of the plazas in this area. 8], Bicyles, install bike lanes both on the roads,and provide paved bikeways that interconnect with the shopping centers in this area too. Traffic lights,and their supports---for me at least, it`s all about family-my family,and what I grew up with---This State of Connecticut. Traffic light poles: at one time truss arms were here,and are now completely gone and in their place mast arms. Span wire is the only one here in Hartford that is of Connecticut that I grew up with,and that this is still being used in many new installations too---like what I see. I was a ward of this state of CT from the begining of my life till 18 years of age,and from the start of my life I took a major interests in the states highways, turnpike, freeways, and traffic lights,and their supports---today I`m protecting, defending,and preserving this state of CT that I grew up live,and love, which is dissappearing through the replacement with new disings that do not bear any resemblence of that which is being replaced. I want to forever keep,and use the span wire installations as they say,and remind me of family,and my home---this state of Connecticut,and is what I grew up with,and this is why? As early as my arrival in this world I was transported about by the CT`s Child Welfare Dept.(10-12 months before I became officially a ward of the State-of Connecticut), and was instilled in me upon my first sighting of traffic lights was this-family. The center traffic light (a four way)I referred

to as the mother,and the other traffic lights her children,and this became forever etched in my mind--and I will never part with it. The span wire allows the lights to sway in the breeze that at times will sway in unison-like a family should,and other times they sway independently of each other-a true family unit will allow for the individual member to express him/her self for the benefit of both the member of the family,and the family unit as a whole. To see an example of what I mean is to go to Hudson Street in Hartford,at these two intersections-Capital Avenue,and Hudson st.,and the intersection of Hudson St.,and Buckingham Street---excellent! At night in low,or no light, the traffic lights seem to be suspended in the air with out wires---love this. 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12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: 7Z2G4
wsp_key: 2a980dfc0d90267e4dee8d02a1ed2a46

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Monday, April 14, 2008 7:29 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title:
02fname: Kenny
03lname: Wallach
04company:
05address1: 19 Porter Green
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: k.wallach@cox.net
11comments: I have filled out the survey before, however I have one additional comment. I live on the South Windsor / Manchester line. I deal with the traffic in and around the Buckland area every day. I am noticing the traffic on Saturdays is getting much worse. The majority of times I drive through the Buckland area I am trying to get onto the highway or getting off the highway heading home. If there were additional entrance and exit ramps on I-291 I would be happy to bypass the Buckland area. I am sure I am not the only one who has thought of this, my question is this feasible and if so are there plans in the near future to do this?Thank youKenny Wallach
MM_insert: comments_form
Submit: Submit
wsp_code: Xbj6R
wsp_key: 783021b58759acd43c78d16b71de621c

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Tuesday, March 18, 2008 9:24 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title:
02fname: Ron
03lname: Micucci
04company: RR Donnelley
05address1:
06address2:
07city: Manchester
08state: CT
09zip: 06042
10email: ron.micucci@rrd.com
11comments: Hello, I would like to know exactly where the possible exit that would be on Redstone Road. We keep hearing rumors, but we would like some facts to understand.
Sincerely,Ron Micucci
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: A4HC2
wsp_key: e18a9d5c2245e21ae7cfceec73fe8738

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Saturday, February 16, 2008 11:34 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mr.
02fname: D. Mick
03lname: Hnath
04company: N/A
05address1: 390 Avery St.
06address2:
07city: So. Windsor
08state: CT
09zip: 06074
10email: hnath@snet.net
11comments:
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: H3NXU
wsp_key: c883df893e9e4b398ac7b809d215d785

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Tuesday, January 22, 2008 8:54 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mrs.
02fname: Betty
03lname: Hanson
04company:
05address1: 19 Shore Drive
06address2:
07city: Coventry
08state: CT
09zip: 06238
10email: betty.hanson@uconn.edu
11comments: Suggestion: A safe walk from Buckland Hills Mall to Evergreen Mall would cut down on some traffic. Currently impossible now.
12mailing: No
MM_insert: comments_form
Submit: Submit
wsp_code: RD57h
wsp_key: 724bb4450a1c1b00338496f0ff7a0229

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Saturday, January 05, 2008 1:54 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title:
02fname: Joanne
03lname: McAuliffe
04company:
05address1: 3 D Amato Drive
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: josox04@cox.net
11comments:
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: Vd5Rh
wsp_key: 62f81f0528c36319b96bccb3813bc281

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Wednesday, November 14, 2007 6:49 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mrs.
02fname: Annamae
03lname: Davis
04company:
05address1: 9 Ridge Rd.
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: mdgi123@yahoo.com
11comments: I have received notice of two meetings from Leslie Black.....the one which I can attend is called the Advisory Committee Meeting #3.....are we allowed to come and participate at this meeting or just to come? Please advise. Also, I have e-mailed Leslie Black and George Jacobs to add Mr. Lee Santos lee.santos@xlgroup.com, to your notice e-mail list.....I would appreciate it if you would let him know when meetings are being held.....Thank you.
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: uLal0
wsp_key: 43ce42ad31b0055612077fcd03ee3010

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Friday, November 09, 2007 2:29 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mrs.
02fname: Wendy
03lname: Magistri
04company:
05address1: 5 Farm Brook Lane
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: magistri4@cox.net
11comments: Please! With the holidays fast approaching, I am begging for a simple solution to help ease the traffic issues in the Buckland mall area. Please make it a priority that drivers not be allowed to "block the box"! Manhattan has a much greater volume of traffic than we do, yet I never seem to see sny gridlock. In Manchester, I have actually had to pick my husband up on the other side of the guard rail on Slater Street in South Windsor because the gridlock has been so bad he couldn't get home in a reasonable amount of time! Issuing tickets to drivers who block the intersections is a simple solution to help - I know it won't solve - the traffic congestion. And the revenue from tickets will help pay for officers until people get the message and stop stuffing themselves through the red lights. manchester and South Windsor wanted the revenue from these businesses...now it's time to be responsible and appropriate some money to help alleviate what this growth has caused.
MM_insert: comments_form
Submit: Submit
wsp_code: vGbN9
wsp_key: JpIViif4yHIUYumq0GClXjGJmlfvKJ3u

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Friday, May 25, 2007 2:44 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Mr.
02fname: William and Annamae
03lname: Davis
04company:
05address1: 9 Ridge Rd.
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: mdgi123@yahoo.com
11comments: upset by the proposal from one resident to open up Ridge Rd., S.Windsor.....or Slater Rd., or Smith St., all ridiculous proposals.
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: VGFeX
wsp_key: f818221f4adc74246910e9d309a613f3

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Monday, May 21, 2007 5:54 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title:
02fname: Bob
03lname: White
04company: NorthEast Area Roundabouts
05address1:
06address2:
07city:
08state: CT
09zip:
10email: NEAR@cox.net
11comments: Please send me meeting notices
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Sunday, April 01, 2007 7:34 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title:
02fname: Jim
03lname: Spafford
04company: CDM Landscaping, LLC
05address1: P.O. Box 1677
06address2:
07city: Manchester
08state: CT
09zip: 06045
10email: cdmlandscaping@cox.net
11comments: Just a quick thank you to you and your team for providing the public information meeting at the Greater Manchester Chamber of Commerce's office on last Friday morning. Please forward notices of future meetings through our email address. Thank you.
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Sunday, April 01, 2007 7:14 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title:
02fname: Robert
03lname: Dickinson
04company:
05address1: 19 Birch Road
06address2:
07city: South Windsor
08state: CT
09zip: 06074-3134
10email: RLDickinson@snet.net
11comments: My concern is that this area be made bicycle and pedestrian friendly. Multi-use bike & pedestrian paths or wide sidewalks should be provided so that bicyclists can come into this area safely. I Believe that enhanced safty will will result in more people accessing this area by bicycle and otherers walking between businesses on Buckland road instead of driving between stores.
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Tuesday, March 27, 2007 9:50 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mr.
02fname: Paul
03lname: Kudra
04company:
05address1: 193 Shoddy Mill Rd.
06address2:
07city: Glastonbury
08state: CT
09zip: 06033
10email: pkudra@cox.net
11comments: I avoid going to the Buckland Hills Mall area as much as possible due primarily due to the very poor traffic and safety. Every intersection is litterally an accident waiting to happen. Cars trying to cross main roads in order to get into, or out of, a store (for example Sam's Club) or free-for-all intersections where multi lanes make for mass confusion as to who's turn is next at stop sign. Based on that I don't even consider taking a bicycle ride to a store to pick up a small item I need, or to see a movie, or eat at a restaurant. This situation would be totally different if the East Coast Greenway was connected with a dedicated spru to the mall, if it was completely separated from vehicle traffic. Simple bike lanes on road sholders would still be too dangerous with all of the heavy traffic. I bicycle commute to Pratt & Whitney on secondary roads in combination with sections of the Greenway now and would definately use a dedicated spru to the mall. So please consider extending a dedicated multi-use paved spru from the Greenway into, and around, the various sections of the mall. I have also requested that the Greenway be extended to the new Rentschler Field development which would allow access to the stores opening up there. Please email if such a dedicated Greenway extension is being considered in this study.
12mailing: No
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Tuesday, March 27, 2007 2:49 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mrs.
02fname: Elizabeth Manning
03lname: Akko
04company:
05address1: 400 Oakland Rd
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: elizabethmanning1@msn.com
11comments: I live in the target area being studied. Living on a busy street has advantages as well as disadvantages. We are close to everything, but we still have to drive. There are no sidewalks. So drive we must even on a warm sunny day we have to drive the mile downtown. Elizabeth Manning Akko
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Monday, March 26, 2007 10:29 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mr.
02fname: James
03lname: Hilliard
04company:
05address1: 78 Birchwood Hts
06address2:
07city: Storrs
08state: CT
09zip: 06268
10email: jim@hilliards.org
11comments: I'm so glad to see that a study group has been assigned to this area.In my experience, the safest and most pleasant commuting route into Hartford is via Tolland Turnpike. It's a problem, of course, at the Tolland Turnpike/Buckland St. intersection due to congestion, as the committee already knows. But after the JCPenney warehouse entrance, the road is quiet, the berms are generally wide enough and the road in good condition.However, the railroad crossings are a real problem. They are not perpendicular to the road and they cross three times in the space of 1/2 mile. It is very difficult to cross them safely without dismounting. In fact, in September 2003, I fell on the last crossing heading west and broke my rib. Perhaps outside of the study area, but a related problem, where the same railroad line crosses North Main in Manchester, the crossing is in poor repair and unsafe for bicycles and vehicles. I hope that any plan for the area addresses the railroad crossings.
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Wednesday, March 07, 2007 12:54 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Blue Category

01title: Mr.
02fname: chet
03lname: camarata
04company: DECD
05address1: 505 hudson st
06address2:
07city: hartford
08state: CT
09zip: 06106
10email: chet.camarata@po.state.ct.us
11comments: The existing land use maps for the study area should be developed and included with the Study.Reference to the State C and D plan as the guide for state investment should be noted and a copy of the guide map should be available for the study area.Philip Yates, Land Use Planner should be available at the next meeting for this important issue.The study should be expanded to identify major non-retail employers served and impacted by this segment of I-84.
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Monday, February 26, 2007 2:44 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

01title: Mr.
02fname: BUCK CHIPS
03lname: HONDA, I
04company: N/A
05address1: 227 MAIN STREET
06address2: APT.# 2
07city: EAST HARTFORD
08state: CT
09zip: 06118
10email: buckchipshonda1st@hotmail.com
11comments: Buck Chips Honda, I227 Main StreetEast Hartford CT 06118Dear James R. Andrini, George Jacobs This is my input on the Buckland Area Transportation Study:1], Aesthetics, Traffic lights be suspended on span wire(diagonly,and box span wire)with new yellow signals as they are now. Improvements shouldn`t mean the distruction of this state of CT. that I knew,and grew up with, and love.-see below for reasons why.2], Freeways, build ramps directly into Buckland Hills Mall from I-84 .3], Straighten out, and extend Slater St. so that it`s connects with Union St, and Main St.4], Build new exit for Slater St.5], New Exit from I-291 near Burnham St to connect with the Buckland Mall from the westside of the Mall.6, More bus service to this area,(esp. express buses)and a free shuttle that takes shoppers the all of the stores, malls, plazas,and move plex in this area,with stops for the for CT Transit buses too.7], Pedestrians, sidewalks on both sides of all of the roads in,and around this major shopping area,and sidewalks that connect from those sidewalks to the stores form the main roads(provide a safe way to walk to and from the stores without having to cross open areas of paved parking lots) paved pathways to connect to all of the plazas in this area.8], Bicyles, install bike lanes both on the roads,and provide paved bikeways that interconnect with the shopping centers in this area too. Traffic lights,and their supports---for me at least, it`s all about family-my family,and what I grew up with---This State of Connecticut. Traffic light poles: at one time truss arms were here,and are now completely gone and in their place mast arms. Span wire is the only one here in Hartford that is of Connecticut that I grew up with,and that this is still being used in many new installations too---like what I see. I was a ward of this state of CT from the begining of my life till 18 years of age,and from the start of my life I took a major interests in the states highways, turnpike, freeways, and traffic lights,and their supports---today I`m protecting, defending,and preserving this state of CT that I grew up live,and love, which is dissappearing through the replacement with new disings that do not bear any resemblence of that which is being replaced. I want to forever keep,and use the span wire installations as they say,and remind me of family,and my home---this state of Connecticut,and is what I grew up with,and this is why? As early as my arrival in this world I was transported about by the CT`s Child Welfare Dept.(10-12 months before I became officially a ward of the State-of Connecticut), and was instilled in me upon my first sighting of traffic lights was this-family. The center traffic light (a four way)I referred to as the mother,and the other traffic lights her children,and this became forever etched in my mind--and I will never part with it. The span wire allows the lights to sway in the breeze that at times will sway in unison-like a family should,and other times they sway independently of each other-a true family unit will allow for the individual member to express him/her self for the benefit of both the member of the family,and the family unit as a whole. To see an example of what I mean is to go to Hudson Street in Hartford,at these two intersections-Capital Avenue,and Hudson st.,and the intersection of Hudson St.,and Buckingham Street---excellent! At night in low,or no light, the traffic lights seem to be suspended in the air with out wires---love this.The traffic lights should be the exclusive

residents of the(span) wire,and the (truss)arm, free of clutter of signs,cameras,when I look up to see the light,I shouldn't`t have to look for the light, the light should look for me---some of these mast arms are cluttered with signs,and cameras that they take from the most important thing up there---the traffic light. The span wire, diagonally across a intersection conveys the family unit in its` strongest form,(best at all intersections except for factories, shopping centers,malls,and industrial parks, and the span wire box set up conveys the individual in its` strongest form(best for shopping centers,and industrial park,and factory entrances). In short the span wire installation (for me)says family,and my home too. It hits me like a ton of bricks this past July, 2005, while I was waiting for the bus in front of the Plaza at Burr Corners in Manchester, CT. I`m looking at the traffic lights there supported by span wire diagonally across the intersection with Tolland Turnpike,and the entrance to Plaza at Burr Corners,and that's when it hits me---its` not just family for me the State of Connecticut, but home, my home, my home state Connecticut,and my hometown, Hartford, CT---the direction that I was facing in the early morning hours, just after sunrise, when that hits me,and hits me hard too. I want to forever keep,and use the truss arm installations as they say,and remind me of family,and my home---this state of Connecticut,and is what I grew up with,and this is why? The truss arm(all metal support system) is what I grew up with,and are very appealing to the eyes,as these have class, style, grace,elegance,clean lines,and look very sharp in the downtowns of CT cities. these are part the street scape,as the smaller versions of the truss arms are the truss arms that are used for street lights---it`s only natural. To see what I`m trying to explain here is to go to New Haven`s downtown. The truss arm is best for downtown ares of Connecticut`s cities,and prominent places too.-anything/place that is of the state of Connecticut, i.e. entrance to State Police barracks, State correctional centers, State offices-except for the more popular ones, span wire is favored at entrances to Connecticut State parks,and forests, to keep it more rustic. The mast arm traffic light support system(poles),and why I don`t like them; These are anti family,and VERY ANTI CONNECTICUT, convey images of hate,and oppression,plus the`re just plain ugly.With the signal being hanged from the arm they show images of hate/hanging of the family, and of these too: traffic lights that are hung from the arm that are black in color shows hate ,and predijuce toward Blacks, signals that are yellow shows same towards Asians-(I`m Japanese, American),and traffic lights that are the D.OT. Green color shows same for the States-in this case, the State of Connecticut-my family/parents whom reared me up,and I`m very big on States rights-10th Amendment of the US Constitution. On mast arms with the arm having an upward curve to it is a liken to a tree branch where the signal is hung to me me at least conveys images of hangings of blacks, with a black signal, Asians,with a yellow signal-again I`m Japanese, American, and with a D.O.T. Green signal my family, my parents the State of Connecticut-and I don`t like this at all....and that they are of other states, not CT, I left PA because of that. On mast arms with curved arms or not, with the signal being rigidly attached to the arm conveys images of oppression,with blacks ,black signals, of Asians with a yellow signal-again I`m Japanese American, and with a D.O.T. Green signal oppression of the states,and their rights-my family/parents the State of Connecticut I see this oppression in those mast arms,and want these type of traffic light support system/poles done away with for these reasons. The mast arm is also a very ugly looking thing too Really, do you need all of that material(metal) to support traffic lights that are made of plastic?, These are common in other states,and I don`t like em one bit, and to me at least are a very cold looking design,one of ridgedness,isolation,and are very grotest,over bearing,very imposing(drowns out the traffic lights-even with the larger ones-that are used here)ghastly,and really do clutter the street sceane-takes away from everything that is round about it. I`m really praying that this design is not used else where--such as Albany Avenue.(this and any other projects planned,or already underway in Hartford,or any place else for that matter). In short the mast arm,and any variation thereof is anti CT, family design/looks,and conveys messages,and images of oppression,and hate towards family, Asians, and Blacks, and is not stately either---it`s of another state---not of The State of Connecticut.Note: the color of the traffic light it self(the body/housing of the traffic light/signal)--- State of Connecticut D.O.T. Green,other green, yellow,and black, is NOT the problem here-never was,and never will be---for me at least--it`s the message/image that it(mast arms) may be sendingSincerely,Buck Chips Honda, I

12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Wednesday, February 07, 2007 10:24 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Mr.
02fname: Stephen
03lname: Mitchell
04company: F. A. Hesketh & Assoc.
05address1: 6 Creamery Brook
06address2:
07city: East Granby
08state: CT
09zip: 06026
10email: smitchell@fahesketh.com
11comments: I represent John Finguerra of Manchester/I-84 Associates and Evergreen Walk LLC, the developers of large portions of the Buckland Hills Area in both Manchester and South Windsor. I have been the primary traffic engineer involved with the development in the area since 1985. The developer has asked that I contact you to offer our knowledge of traffic operations in the area, and to request that we be included on the Advisory Committee. I spoke with the original project manager at Goodkind shortly before she left the firm, and she told me that we would be contacted by the next project manager. However, to date that has not occurred. Please feel free to email your reply, or to telephone at 653-8000. Thank you.
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Monday, January 22, 2007 9:29 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Mr.
02fname: James
03lname: Mayer
04company: Town of Manchester
05address1: 494 Main Street
06address2: P.O. Box 191
07city: Manchester
08state: CT
09zip: 06045-0191
10email: JMayer22@ci.manchester.ct.us
11comments: The team should look at Buckland Street between I-84 EB Exit 62 and Pavilions Drive to check the feasibility of a diverging diamond interchange due to the heavy left turns at both intersections.
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Friday, January 19, 2007 6:54 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title:
02fname:
03lname:
04company:
05address1:
06address2:
07city:
08state: CT
09zip:
10email: linda369369@netzero.com
11comments: Please add me to your email list for announcements, meeting information, and any other updates.Thanks!
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Friday, January 19, 2007 10:09 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title:
02fname: Lawrence
03lname: Cook
04company:
05address1:
06address2:
07city:
08state: CT
09zip:
10email: lawrence.cook@cga.ct.gov
11comments:
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Thursday, January 18, 2007 10:39 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Mr.
02fname: Mark
03lname: Sutcliffe
04company: Red Oak Landscaping
05address1: 40 Phelps Rd.
06address2:
07city: Manchester
08state: CT
09zip: 06042-3210
10email: MSUTCL1776@aol.com
11comments: On the "Study Area" page you misspelled Deming Street on the map ("Demming" is incorrect), and miswrote it as "Deming Road" in the text. That does not inspire great confidence.
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Thursday, January 18, 2007 10:24 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title:
02fname: Emilie
03lname:
04company:
05address1:
06address2:
07city: Vernon
08state: CT
09zip: 06066
10email: butterfly_hig78@hotmail.com
11comments: I have seen the news on Fox 61 about this project. I believe that the driving routes should be looked at and were never looked at when the mall was built. I grew up in Manchester and now avoid the mall area whenever possible especially around the holidays. The routes are not clearly marked and newcomers never know where they are going. There are areas ie McDonalds near Uno's that should not have a left hand turn, people taking a left hand turn from the light near Panera get stuck while waiting for a person to make the left (risk for accidents). I think that it is great that the traffic routes are being looked at for the mall considering that there are many unsafe places in that area. Thank you for your time.
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Thursday, January 18, 2007 10:09 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Mr.
02fname: Richard
03lname: Lourie
04company:
05address1: 143 Highland St
06address2:
07city: Manchester
08state: CT
09zip: 06040
10email: Rlouriejr1@cox.net
11comments:
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Thursday, January 18, 2007 4:29 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Mr.
02fname: Ralph
03lname: Acanto
04company:
05address1: 38 Ivy Lane
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: r.acanto@cox.net
11comments: I would like to suggest that road signs should be posted over the road with arrows poiting to certain destinations i,e, Rt 84,left turn arrow, Buckland Rd. straight, Pleasant Valley, left turn, etc.. I see many drivers get confused as to where to go. Make the signage bigger and clearer.
12mailing: No
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Thursday, January 18, 2007 6:14 AM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title:
02fname: Jean
03lname: Knapp
04company:
05address1:
06address2:
07city:
08state: CT
09zip:
10email: jean.knapp@thehartford.com
11comments:
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Wednesday, January 17, 2007 7:54 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Mr.
02fname: Warren
03lname: Sentivany
04company:
05address1: 1023 Tolland Tpke.
06address2:
07city: Manchester
08state: CT
09zip: 06042
10email: WSentivany@aol.com
11comments: I have lived in Manchester at the same location for over 50 years. When I first moved here I could lay down on Tolland Turnpike and not get run over by a car and now I fear getting run over if I try crossing Tolland Turnpike. I understand that new businesses in town have attributed to the increased traffic which I could tolerate if my property taxes went down or even stayed the same but they went up and are still going up. Now I heard on the news that the town is going to study the traffic around the Buckland Hills area and may put in shuttles,walkways and rail systems for the shoppers. We certainly don't need more construction and confusion in this area. This is an absurd idea. This study should have been done before this whole Buckland Hills deal was started. The people running this town are a big disappoitment to me and I feel that they let the citizens of this town down.
12mailing: Yes
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Wednesday, January 17, 2007 6:09 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Ms.
02fname: Christine
03lname: Kalagian
04company:
05address1: 145 Burke Street
06address2:
07city: East Hartford
08state: CT
09zip: 06118
10email: christine.kalagian@rrd.com
11comments: I currently work at 151 Red Stone Road in Manchester. I understand that you a re looking into traffic problems in the area. One of the biggest issues that I have encountered in the years that I have worked there is the speeding and running of red lights on Buckland Street. I literally take my life into my hands when pulling out of Red Stone Road. There are signs posted but no one follows them. It really is a dangerous intersection. Thank you for listening.Christine Kalagian
12mailing: No
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Jacobs, George

From: formmailer@secureserver.net
Sent: Wednesday, December 27, 2006 4:29 PM
To: info@bucklandstudy.org
Subject: Buckland Transportation Study

Follow Up Flag: Follow up
Flag Status: Completed

01title: Mr.
02fname: jeff
03lname: donahue
04company:
05address1: 1216 w. muddle typk
06address2: c-1 Beacon hill
07city: manchester
08state: CT
09zip: 06040
10email: donahuejeff@hotmail.com
11comments: Dear Sir; I am contacting you today to ask that you consider more public transtation such as bus's to the mall. staarting in Jan. the mall has extended the hours to include early Sat. morning and late Friday nights. But we do not have a bus service that runs with that and that means that i have to take a cab to work which is an unwanted expense. I am sure that i am not alone we need more bus's and/better times to assist the working person. The system does not include us at all and if we cannot get to the mall how are customers going to? Also it is much more friendly for the envirement and it is time for someone to address this problem. Thank you for your time. Jeff Donahue
MM_insert: comments_form
Submit: Submit

This e-mail was generated from a form submission on your website: bucklandstudy.org

Appendix D
Recommendation Plan

Ellington Street
Oakland Street
Deming Street
Buckland Road
Clark Street
Smith Street
PROPOSED CONNECTION TO EVERGREEN WALK
SOUTH WINDSOR
MANCHESTER
Hale Road
Improvements by Others
Interstate 84
Improvements by Others
Buckland Hills Drive
Slater Street
Improvements by Others
Tolland Turnpike
Pleasant Valley Road
Buckland Street
Transit Center
Interstate 84
Redstone Road
Tolland Turnpike
Tolland Turnpike
Tolland Turnpike
Interstate 84
N
SCALE IN FEET
0 400 800

BIKE LANE
SHOULDER WIDENING
SIDEWALK
CROSSWALK
ROADWAY ALIGNMENT
BRIDGE
RETAINING WALL
ROADWAY WIDENING
MIXED USE TRAIL
PROPOSED EASEMENT

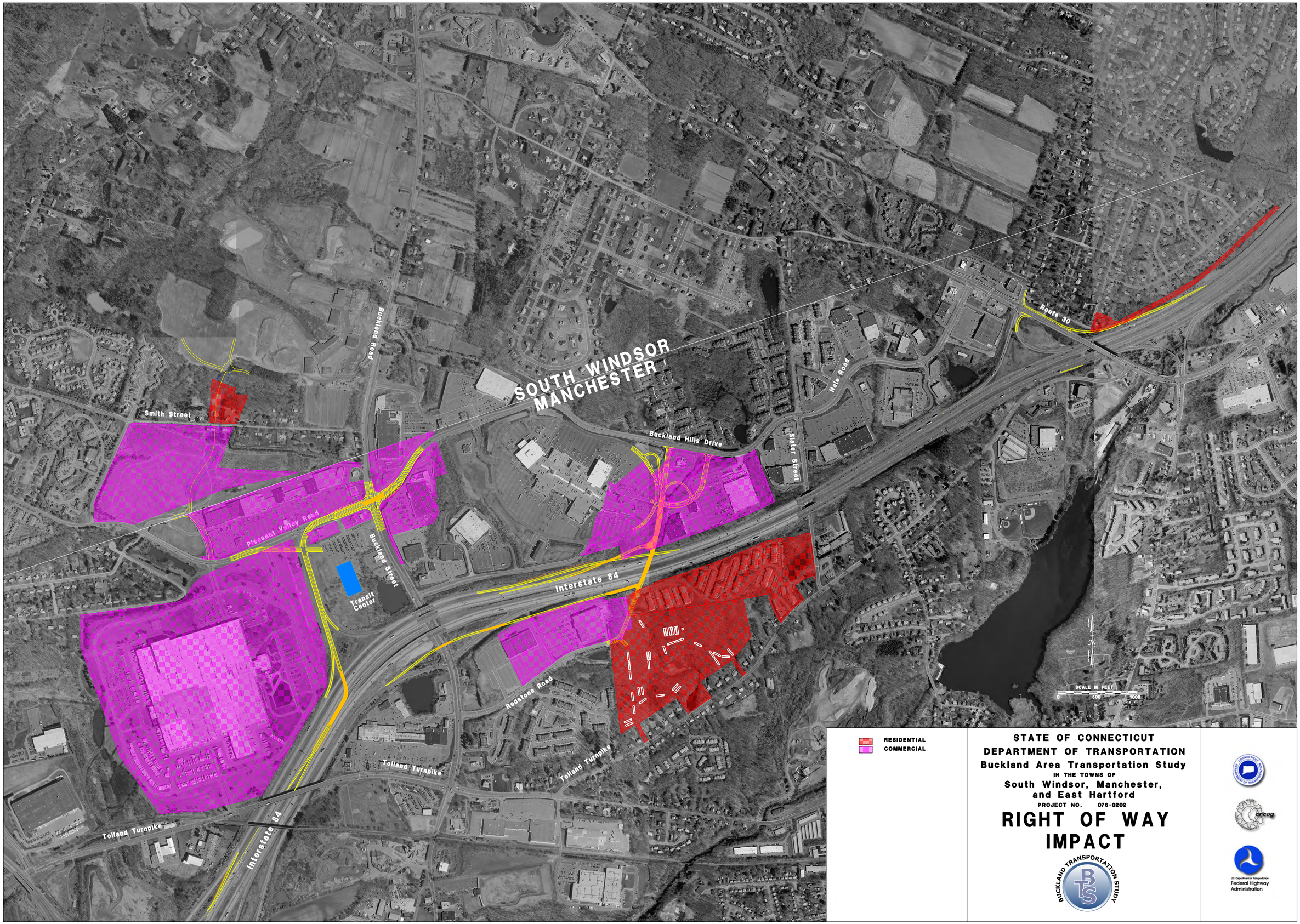
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
Buckland Area Transportation Study
IN THE TOWNS OF
South Windsor, Manchester, and East Hartford
PROJECT NO. 076-0202

DRAFT FINAL RECOMMENDATION

BUCKLAND TRANSPORTATION STUDY

U.S. Department of Transportation
Federal Highway Administration

Appendix E
Right of Way Impacts



RESIDENTIAL
COMMERCIAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
Buckland Area Transportation Study
IN THE TOWNS OF
South Windsor, Manchester,
and East Hartford
PROJECT NO. 076-0202

RIGHT OF WAY IMPACT

BUCKLAND TRANSPORTATION STUDY

U.S. Department of Transportation
Federal Highway Administration

Appendix F
Construction Cost Estimates

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 4393**

DATE: 2/13/2009

PROJECT:
BUCKLAND AREA TRANSPORTATION STUDY **MADE BY:** Ranjit Bhave
COST ESTIMATE FOR REDSTONE EXTENSION **CHKD BY:** George Jacobs

SUMMARY

(2008 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION
ROADWAY ITEMS				
EARTH EXCAVATION	CY	1,000	$35.00	$35,000
ROCK EXCAVATION	CY	100	$80.00	$8,000
UNSUITABLE MATERIAL EXCAVATION (MUCK) @50% OF ROCK EXCAVATION	CY	50	$40.00	$2,000
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS) @ 1% TOTAL EXCAVATION	CY	11	$80.00	$880
HAZARDOUS WASTE EXCAVATION (PCB's) @ 1% TOTAL EXCAVATION	CY	11	$520.00	$5,720
BORROW	CY	150,276	$30.00	$4,508,289
NEW DRAINAGE SYSTEM	SF	338,482	$3.00	$1,015,446
EXISTING DRAINAGE UPGRADE @ 1% NEW DRAINAGE SYSTEM	SF	3,385	$1.00	$3,385
SUPERPAVE	TON	19,787	$100.00	$1,978,709
CONCRETE BASE COURSE WIDENING	CY	10,447	$300.00	$3,134,093
MILLING OF BITUMINOUS CONCRETE (3 in)	SF	45,800	$0.50	$22,900
SUBBASE	CY	10,447	$21.00	$219,386
FORMATION OF SUBGRADE	SF	338,482	$0.25	$84,621
MAJOR PIPE CULVERTS	FT	500	$600	$300,000
CONCRETE BOX CULVERTS	FT	250	$975	$243,750
NEW BRIDGE	SF	153,748	$375	$57,655,659
RETAINING WALLS	SF	15,624	$65	$1,015,560
CONCRETE MEDIAN BARRIER	FT	0	$80.00	$0
TRAFFIC SIGNAL MODIFICATIONS	EA	2	$50,000	$100,000
NEW TRAFFIC SIGNALS	EA	3	$100,000	$300,000
ROADWAY LIGHTING (RAMPS)	FT	9,467	$40.00	$378,680
BCLC	FT	17,041	$10.00	$170,406
CONCRETE CURBING	FT	1,893	$40.00	$75,736
GUIDERAIL	FT	10,224	$28.00	$286,282
SIGNING & STRIPING (ESTIMATED)	LS	1	$435,000	$435,000
STAGE CONSTRUCTION ITEMS (ESTIMATED)	LS	1	$2,000,000	$2,000,000
NOISE BARRIERS (ESTIMATED)	LS	1	$720,000	$720,000
MITIGATION (ESTIMATED)	LS	1	$900,000	$900,000
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$820,400	$820,400
			SUBTOTAL A	**$76,419,901**
LUMP SUM ITEMS				
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$1,528,398
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$2,292,597
MOBILIZATION (7.5% OF SUBTOTAL A)				$5,731,493
MINOR ITEMS (20% OF SUBTOTAL A)				$15,283,980
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$1,528,398
			SUBTOTAL B	**$102,784,767**
ADDITIONAL ITEMS				
INCIDENTALS (12% OF SUBTOTAL B)				$12,334,172
CONTINGENCIES (7% OF SUBTOTAL B)				$7,194,934
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$8,222,781
UTILITY COST (2% OF SUBTOTAL B)				$2,055,695
RIGHT-OF-WAY (ESTIMATED)	LS	1	$1,000,000	$1,000,000
			TOTAL	**$133,592,350**
			ROUNDED TOTAL	**$133,600,000**

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 4393**

DATE: 2/13/2009

PROJECT:
BUCKLAND AREA TRANSPORTATION STUDY **MADE BY:** Ranjit Bhave
COST ESTIMATE FOR RAMP TO NORTHBOUND I-291 **CHKD BY:** George Jacobs

SUMMARY

(2008 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION
ROADWAY ITEMS				
EARTH EXCAVATION	CY	250	$35.00	$8,750
ROCK EXCAVATION	CY	25	$80.00	$2,000
UNSUITABLE MATERIAL EXCAVATION (MUCK) @50% OF ROCK EXCAVATION	CY	13	$40.00	$500
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS) @ 1% TOTAL EXCAVATION	CY	3	$80.00	$220
HAZARDOUS WASTE EXCAVATION (PCB's) @ 1% TOTAL EXCAVATION	CY	3	$520.00	$1,430
BORROW	CY	2,755	$30.00	$82,658
NEW DRAINAGE SYSTEM	SF	21,840	$3.00	$65,520
EXISTING DRAINAGE UPGRADE @ 1% NEW DRAINAGE SYSTEM	SF	218	$1.00	$218
SUPERPAVE	TON	1,277	$100.00	$127,673
CONCRETE BASE COURSE WIDENING	CY	674	$300.00	$202,222
SUBBASE	CY	674	$21.00	$14,156
FORMATION OF SUBGRADE	SF	21,840	$0.25	$5,460
RETAINING WALL	SF	4,560	$65.00	$296,400
CONCRETE MEDIAN BARRIER	FT	1,310	$65.00	$85,150
ROADWAY LIGHTING (EXPRESSWAY)	FT	0	$55.00	$0
ROADWAY LIGHTING (RAMPS)	FT	840	$40.00	$33,600
GUIDERAIL	FT	504	$28.00	$14,112
SIGNING & STRIPING (ESTIMATED)	LS	1	$500,000	$500,000
STAGE CONSTRUCTION ITEMS (ESTIMATED)	U	1	$500,000	$500,000
NOISE BARRIERS (ESTIMATED)	LS	1	$50,000	$50,000
MITIGATION (ESTIMATED)	U	1	$50,000	$50,000
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$100,000	$100,000
			SUBTOTAL A	**$2,140,070**
LUMP SUM ITEMS				
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$42,801
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$64,202
MOBILIZATION (7.5% OF SUBTOTAL A)				$160,505
MINOR ITEMS (15% OF SUBTOTAL A)				$321,010
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$42,801
			SUBTOTAL B	**$2,771,390**
ADDITIONAL ITEMS				
INCIDENTALS (7% OF SUBTOTAL B)				$193,997
CONTINGENCIES (5% OF SUBTOTAL B)				$138,570
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$221,711
UTILITY COST (2% OF SUBTOTAL B)				$55,428
RIGHT-OF-WAY (ESTIMATED)	LS	1	$0	$0
			TOTAL	**$3,381,096**
			ROUNDED TOTAL	**$3,400,000**

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 4393**

DATE: 2/13/2009

PROJECT:
BUCKLAND AREA TRANSPORTATION STUDY **MADE BY:** Ranjit Bhave
EXIT 63 IMPROVEMENTS **CHKD BY:** George Jacobs

SUMMARY

(2008 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION
ROADWAY ITEMS				
EARTH EXCAVATION	CY	750	$35.00	$26,250
ROCK EXCAVATION	CY	75	$80.00	$6,000
UNSUITABLE MATERIAL EXCAVATION (MUCK) @50% OF ROCK EXCAVATION	CY	38	$40.00	$1,500
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS) @ 1% TOTAL EXCAVATION	CY	8	$80.00	$660
HAZARDOUS WASTE EXCAVATION (PCB's) @ 1% TOTAL EXCAVATION	CY	8	$520.00	$4,290
BORROW	CY	64,022	$30.00	$1,920,665
NEW DRAINAGE SYSTEM	SF	515,022	$3.00	$1,545,066
EXISTING DRAINAGE UPGRADE @ 1% NEW DRAINAGE SYSTEM	SF	5,150	$1.00	$5,150
SUPERPAVE	TON	30,107	$100.00	$3,010,733
CONCRETE BASE COURSE WIDENING	CY	15,896	$300.00	$4,768,722
SUBBASE	CY	15,896	$21.00	$333,811
FORMATION OF SUBGRADE	SF	515,022	$0.25	$128,756
BRIDGE	SF	10,000	$375.00	$3,750,000
RETAINING WALL	SF	5,000	$65.00	$325,000
CONCRETE MEDIAN BARRIER	FT	0	$80.00	$0
ROADWAY LIGHTING (EXPRESSWAY)	FT	18,930	$55.00	$1,041,150
ROADWAY LIGHTING (RAMPS)	FT	5,247	$40.00	$209,880
GUIDERAIL	FT	1,704	$28.00	$47,712
SIGNING & STRIPING (ESTIMATED)	LS	1	$500,000	$500,000
STAGE CONSTRUCTION ITEMS (ESTIMATED)	LS	1	$500,000	$500,000
NOISE BARRIERS (ESTIMATED)	LS	1	$50,000	$50,000
MITIGATION (ESTIMATED)	LS	1	$50,000	$50,000
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$100,000	$100,000
			SUBTOTAL A	**$18,325,344**
LUMP SUM ITEMS				
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$366,507
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$549,760
MOBILIZATION (7.5% OF SUBTOTAL A)				$1,374,401
MINOR ITEMS (15% OF SUBTOTAL A)				$2,748,802
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$366,507
			SUBTOTAL B	**$23,731,321**
ADDITIONAL ITEMS				
INCIDENTALS (7% OF SUBTOTAL B)				$1,661,192
CONTINGENCIES (5% OF SUBTOTAL B)				$1,186,566
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$1,898,506
UTILITY COST (2% OF SUBTOTAL B)				$474,626
RIGHT-OF-WAY (ESTIMATED)	LS	1	$500,000	$500,000
			TOTAL	**$29,452,211**
			ROUNDED TOTAL	**$29,500,000**

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 4393**

DATE: 2/13/2009

PROJECT:
BUCKLAND AREA TRANSPORTATION STUDY **MADE BY:** Ranjit Bhave
COST ESTIMATE FOR HOV RAMPS **CHKD BY:** George Jacobs

SUMMARY

(2008 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION
ROADWAY ITEMS				
EARTH EXCAVATION	CY	1,000	$35.00	$35,000
ROCK EXCAVATION	CY	100	$80.00	$8,000
UNSUITABLE MATERIAL EXCAVATION (MUCK) @50% OF ROCK EXCAVATION	CY	50	$40.00	$2,000
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS) @ 1% TOTAL EXCAVATION	CY	11	$80.00	$880
HAZARDOUS WASTE EXCAVATION (PCB's) @ 1% TOTAL EXCAVATION	CY	11	$520.00	$5,720
BORROW	CY	146,835	$30.00	$4,405,060
NEW DRAINAGE SYSTEM	SF	332,004	$3.00	$996,012
EXISTING DRAINAGE UPGRADE @ 1% NEW DRAINAGE SYSTEM	SF	3,320	$1.00	$3,320
SUPERPAVE	TON	19,408	$100.00	$1,940,840
CONCRETE BASE COURSE WIDENING	CY	10,247	$300.00	$3,074,111
SUBBASE	CY	10,247	$21.00	$215,188
FORMATION OF SUBGRADE	SF	332,004	$0.25	$83,001
MAJOR PIPE CULVERTS	FT	300	$600	$180,000
CONCRETE BOX CULVERTS	FT	100	$975	$97,500
NEW BRIDGE	SF	32,341	$375	$12,128,042
RETAINING WALLS	SF	9,500	$65	$617,500
STANDPIPES (ESTIMATED)	EA	0	$14,000	$0
CONCRETE MEDIAN BARRIER	FT	1,000	$65.00	$65,000
TRAFFIC SIGNAL MODIFICATIONS	EA	0	$50,000	$0
NEW TRAFFIC SIGNAL	EA	0	$100,000	$0
ROADWAY LIGHTING (EXPRESSWAY)	FT	0	$175.00	$0
ROADWAY LIGHTING (RAMPS)	FT	6,291	$40.00	$251,640
BCLC	FT	2,516	$10.00	$25,164
CONCRETE CURBING	FT	629	$40.00	$25,164
GUIDERAIL	FT	1,887	$28.00	$52,844
SIGNING & STRIPING (ESTIMATED)	LS	1	$435,000	$435,000
STAGE CONSTRUCTION ITEMS (ESTIMATED)	LS	1	$2,000,000	$2,000,000
NOISE BARRIERS (ESTIMATED)	LS	1	$720,000	$720,000
MITIGATION (ESTIMATED)	LS	1	$900,000	$900,000
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$820,400	$820,400
			SUBTOTAL A	**$29,087,387**
LUMP SUM ITEMS				
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$581,748
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$872,622
MOBILIZATION (7.5% OF SUBTOTAL A)				$2,181,554
MINOR ITEMS (20% OF SUBTOTAL A)				$5,817,477
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$581,748
			SUBTOTAL B	**$39,122,535**
ADDITIONAL ITEMS				
INCIDENTALS (12% OF SUBTOTAL B)				$4,694,704
CONTINGENCIES (5% OF SUBTOTAL B)				$1,956,127
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$3,129,803
UTILITY COST (2% OF SUBTOTAL B)				$782,451
RIGHT-OF-WAY (ESTIMATED)	LS	1	$100,000	$100,000
			TOTAL	**$49,785,620**
			ROUNDED TOTAL	**$49,800,000**

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 4393**

DATE: 2/13/2009

PROJECT:

BUCKLAND AREA TRANSPORTATION STUDY **MADE BY:** Ranjit Bhave

COST ESTIMATE FOR REALIGNMENT OF PLEASANT VALLEY ROAD **CHKD BY:** George Jacobs

SUMMARY

(2008 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION
ROADWAY ITEMS				
EARTH EXCAVATION	CY	1,779	$35.00	$62,282
ROCK EXCAVATION	CY	178	$80.00	$14,236
UNSUITABLE MATERIAL EXCAVATION (MUCK) @50% OF ROCK EXCAVATION	CY	89	$40.00	$3,559
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS) @ 1% TOTAL EXCAVATION	CY	20	$80.00	$1,566
HAZARDOUS WASTE EXCAVATION (PCB's) @ 1% TOTAL EXCAVATION	CY	20	$520.00	$10,179
BORROW	CY	37,280	$30.00	$1,118,404
NEW DRAINAGE SYSTEM	SF	96,092	$3.00	$288,276
EXISTING DRAINAGE UPGRADE @ 1% NEW DRAINAGE SYSTEM	SF	961	$1.00	$961
SUPERPAVE	TON	5,617	$100.00	$561,738
CONCRETE BASE COURSE WIDENING	CY	2,966	$300.00	$889,741
MILLING OF BITUMINOUS CONCRETE (3 in)	SF	156,600	$0.50	$78,300
SUBBASE	CY	2,966	$21.00	$62,282
FORMATION OF SUBGRADE	SF	96,092	$0.25	$24,023
MAJOR PIPE CULVERTS	FT	300	$600	$180,000
CONCRETE BOX CULVERTS	FT	75	$975	$73,125
NEW BRIDGE	SF	0	$375	$0
RETAINING WALLS	SF	0	$65	$0
CONCRETE MEDIAN BARRIER	FT	0	$80.00	$0
TRAFFIC SIGNAL MODIFICATIONS	EA	0	$50,000	$0
NEW TRAFFIC SIGNAL	EA	1	$100,000	$100,000
ROADWAY LIGHTING (RAMPS)	FT	1,532	$40.00	$61,280
BCLC	FT	1,226	$10.00	$12,256
CONCRETE CURBING	FT	306	$40.00	$12,256
GUIDERAIL	FT	919	$28.00	$25,738
SIGNING & STRIPING (ESTIMATED)	LS	1	$10,000	$10,000
STAGE CONSTRUCTION ITEMS (ESTIMATED)	LS	1	$50,000	$50,000
NOISE BARRIERS (ESTIMATED)	LS	1	$0	$0
MITIGATION (ESTIMATED)	LS	1	$100,000	$100,000
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$75,000	$75,000
			SUBTOTAL A	**$3,815,200**
LUMP SUM ITEMS				
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$76,304
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$114,456
MOBILIZATION (7.5% OF SUBTOTAL A)				$286,140
MINOR ITEMS (15% OF SUBTOTAL A)				$572,280
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$76,304
			SUBTOTAL B	**$4,940,684**
ADDITIONAL ITEMS				
INCIDENTALS (7% OF SUBTOTAL B)				$345,848
CONTINGENCIES (5% OF SUBTOTAL B)				$247,034
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$395,255
UTILITY COST (2% OF SUBTOTAL B)				$98,814
RIGHT-OF-WAY (ESTIMATED)	LS	1	$1,000,000	$1,000,000
			TOTAL	**$7,027,635**
			ROUNDED TOTAL	**$7,000,000**

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 4393**

DATE: 2/13/2009

PROJECT:
BUCKLAND AREA TRANSPORTATION STUDY **MADE BY:** Ranjit Bhave
COST ESTIMATE FOR SPUI **CHKD BY:** George Jacobs

SUMMARY

(2008 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION
ROADWAY ITEMS				
EARTH EXCAVATION	CY	1,481	$35.00	$51,819
ROCK EXCAVATION	CY	148	$80.00	$11,844
UNSUITABLE MATERIAL EXCAVATION (MUCK) @50% OF ROCK EXCAVATION	CY	74	$40.00	$2,961
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS) @ 1% TOTAL EXCAVATION	CY	16	$80.00	$1,303
HAZARDOUS WASTE EXCAVATION (PCB's) @ 1% TOTAL EXCAVATION	CY	16	$520.00	$8,469
BORROW	CY	31,017	$30.00	$930,515
NEW DRAINAGE SYSTEM	SF	388,096	$3.00	$1,164,288
EXISTING DRAINAGE UPGRADE @ 1% NEW DRAINAGE SYSTEM	SF	3,881	$1.00	$3,881
SUPERPAVE	TON	22,687	$100.00	$2,268,745
CONCRETE BASE COURSE WIDENING	CY	11,978	$300.00	$3,593,481
MILLING OF BITUMINOUS CONCRETE (3 in)	SF	552,100	$0.50	$276,050
SUBBASE	CY	11,978	$21.00	$251,544
FORMATION OF SUBGRADE	SF	388,096	$0.25	$97,024
MAJOR PIPE CULVERTS	FT	300	$600	$180,000
CONCRETE BOX CULVERTS	FT	75	$975	$73,125
NEW BRIDGE	SF	16,023	$375	$6,008,677
RETAINING WALLS	SF	25,500	$65	$1,657,500
CONCRETE MEDIAN BARRIER	FT	3,315	$80.00	$265,200
TRAFFIC SIGNAL MODIFICATIONS	EA	2	$50,000	$100,000
NEW TRAFFIC SIGNAL	EA	2	$100,000	$200,000
ROADWAY LIGHTING (RAMPS)	FT	3,379	$40.00	$135,160
BCLC	FT	2,703	$10.00	$27,032
CONCRETE CURBING	FT	676	$40.00	$27,032
GUIDERAIL	FT	2,027	$28.00	$56,767
SIGNING & STRIPING (ESTIMATED)	LS	1	$435,000	$435,000
STAGE CONSTRUCTION ITEMS (ESTIMATED)	LS	1	$2,000,000	$2,000,000
NOISE BARRIERS (ESTIMATED)	LS	1	$720,000	$720,000
MITIGATION (ESTIMATED)	LS	1	$900,000	$900,000
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$820,400	$820,400
			SUBTOTAL A	**$22,267,817**
LUMP SUM ITEMS				
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$445,356
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$668,035
MOBILIZATION (7.5% OF SUBTOTAL A)				$1,670,086
MINOR ITEMS (15% OF SUBTOTAL A)				$3,340,173
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$445,356
			SUBTOTAL B	**$28,836,823**
ADDITIONAL ITEMS				
INCIDENTALS (7% OF SUBTOTAL B)				$2,018,578
CONTINGENCIES (5% OF SUBTOTAL B)				$1,441,841
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$2,306,946
UTILITY COST (2% OF SUBTOTAL B)				$576,736
RIGHT-OF-WAY (ESTIMATED)	LS	1	$1,000,000	$1,000,000
			TOTAL	**$36,180,924**
			ROUNDED TOTAL	**$36,200,000**

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 4393**

DATE: 4/2/2009

PROJECT:
BUCKLAND AREA TRANSPORTATION STUDY **MADE BY:** Ranjit Bhave
COST ESTIMATE FOR HALF AUXILIARY LANES **CHKD BY:** George Jacobs

SUMMARY

(2008 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION
ROADWAY ITEMS				
EARTH EXCAVATION	CY	1,000	$35.00	$35,000
ROCK EXCAVATION	CY	100	$80.00	$8,000
UNSUITABLE MATERIAL EXCAVATION (MUCK) @50% OF ROCK EXCAVATION	CY	50	$40.00	$2,000
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS) @ 1% TOTAL EXCAVATION	CY	11	$80.00	$880
HAZARDOUS WASTE EXCAVATION (PCB's) @ 1% TOTAL EXCAVATION	CY	11	$520.00	$5,720
BORROW	CY	57,846	$30.00	$1,735,389
NEW DRAINAGE SYSTEM	SF	286,700	$3.00	$860,100
EXISTING DRAINAGE UPGRADE @ 1% NEW DRAINAGE SYSTEM	SF	2,867	$1.00	$2,867
SUPERPAVE	TON	16,760	$100.00	$1,676,000
CONCRETE BASE COURSE WIDENING	CY	8,849	$300.00	$2,654,630
MILLING OF BITUMINOUS CONCRETE (3 in)	SF	0	$0.50	$0
SUBBASE	CY	8,849	$21.00	$185,824
FORMATION OF SUBGRADE	SF	286,700	$0.25	$71,675
MAJOR PIPE CULVERTS	FT	500	$600	$300,000
CONCRETE BOX CULVERTS	FT	250	$975	$243,750
NEW BRIDGE	SF	8,000	$375	$3,000,000
RETAINING WALLS	SF	0	$65	$0
CONCRETE MEDIAN BARRIER	FT	0	$80.00	$0
TRAFFIC SIGNAL MODIFICATIONS	EA	2	$50,000	$100,000
NEW TRAFFIC SIGNALS	EA	3	$100,000	$300,000
ROADWAY LIGHTING (FREEWAY)	FT	14,335	$40.00	$573,400
BCLC	FT	0	$10.00	$0
CONCRETE CURBING	FT	0	$40.00	$0
GUIDERAIL	FT	0	$28.00	$0
SIGNING & STRIPING (ESTIMATED)	LS	1	$435,000	$435,000
STAGE CONSTRUCTION ITEMS (ESTIMATED)	LS	1	$2,000,000	$2,000,000
NOISE BARRIERS (ESTIMATED)	LS	1	$720,000	$720,000
MITIGATION (ESTIMATED)	LS	1	$900,000	$900,000
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$820,400	$820,400
			SUBTOTAL A	**$16,630,635**
LUMP SUM ITEMS				
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$332,613
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$498,919
MOBILIZATION (7.5% OF SUBTOTAL A)				$1,247,298
MINOR ITEMS (20% OF SUBTOTAL A)				$3,326,127
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$332,613
			SUBTOTAL B	**$22,368,204**
ADDITIONAL ITEMS				
INCIDENTALS (12% OF SUBTOTAL B)				$2,684,184
CONTINGENCIES (7% OF SUBTOTAL B)				$1,565,774
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$1,789,456
UTILITY COST (2% OF SUBTOTAL B)				$447,364
RIGHT-OF-WAY (ESTIMATED)	LS	1	$100,000	$100,000
			TOTAL	**$28,954,983**
			ROUNDED TOTAL	**$29,000,000**

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 4393
DATE: 10/21/2008

PROJECT:
BUCKLAND AREA TRANSPORTATION STUDY
Bike/Ped Imrpovements in Manchester

MADE BY: Ranjit Bhave
CHKD BY: Bill O'Keefe

MEASUREMENTS
UNIT - AS NOTED

Name of Corridor	Type of Improvement									Total Cost
	Bike Lane	Sidewalk	Crosswalk	Ped Signals	Mixed Use Trail	Road Widening			Shoulder Striping *	
						Length	Width	Area		
	(FT)	(FT)	(EA)	(EA)	(FT)	(FT)	(FT)	(SQ FT)	(FT)	
Adams Street/ Buckland Street/ Buckland Road	9382	0	14	0	0			0	0	16873
Chapel Road	0	0	5	0	0			0	0	1000
Clark Street	220							726		11220
Deming Street	0	477	2	0	0			0	7086	29139
Ellington Road/ Oakland Road										
Pavilions Drive	4558	0	3	0	0			0	0	7437
Pleasant Valley Road/ Buckland Hills Drive/ Hale Road	0	0	19	0	0			0	0	3800
Redstone Road	9556	0	4	0	0			0	0	15134
Slater Street	5654	0	2	0	0			9804	0	155941
Smith Street										
Tolland Turnpike	13368	7466	11	0	0			0	0	395552
wheeler Road										
Total	42738	7943	60	0	0			10530	7086	
Unit cost	$2	$50	$200	$10,500				$15	$1	
Total cost	$64,107	$397,150	$12,000	$0	$0			$157,950	$4,889	$636,096

* Restripring to provide wide shoulders

DEWBERRY-GOODKIND, INC

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 4393
DATE: 10/21/2008

PROJECT:
BUCKLAND AREA TRANSPORTATION STUDY
Bike/Ped Imrpovements in South Windsor

MADE BY: Ranjit Bhave
CHKD BY: Bill O'Keefe

MEASUREMENTS
UNIT - AS NOTED

Name of Corridor	Type of Improvement									Total Cost
	Bike Lane	Sidewalk	Crosswalk	Ped Signals	Mixed Use Trail	Road Widening			Shoulder Striping *	
						Length	Width	Area		
	(FT)	(FT)	(EA)	(EA)	(FT)	(FT)	(FT)	(SQ FT)	(FT)	
Adams Street/ Buckland Street/ Buckland Road	13390	2975	16	4	320			0	0	$214,355
Chapel Road										
Clark Street	21824	10866	16	0	0			61281	0	$1,498,451
Deming Street	16818	6798	18	0	0			50640	1600	$1,129,431
Ellington Road/ Oakland Road	0	7692	3	0	0			38922	19274	$982,329
Pavilions Drive										
Pleasant Valley Road/ Buckland Hills Drive/ Hale Road	5908	3557	4	0	0			5741	0	$273,627
Redstone Road										
Slater Street	2764	0	0	0	0			8412	0	$130,326
Smith Street	9702	3475	4					19558		$482,473
Tolland Turnpike										
Wheeler Road	0	0	0	0	0			5464	2728	$83,842
Total	70406	35363	61	4	320			190018	23602	
Unit cost	$2	$50	$200	$10,500	$1			$15	$1	
Total cost	$105,609	$1,768,150	$12,200	$42,000	$320			$2,850,270	$16,285	$4,794,834

* Restripring to provide wide shoulders

Multi-modal Transportation Center
Facility and Cost Summary

Transportation Center Features	Cost Assumptions
	Construction
• Waiting Room	• Transportation Building
• Ticketing/ Fare Collection Area	2,000 SF @ $150/SF = $300,000
• 2 Offices	
• 2 Bathrooms	• Bus Area/Canopy
• Employee break room	6,500 SF @ $150/SF = $975,000
• 6 bus berths	
• Canopy	• Structured Parking @ $15,000/Space = $ 7,500,000
• Circulator/Shuttle Bus Service	
• Local Bus Service	Sub Total = $8,775,000
• BRT Service	
• Taxi Stand	Design, Engineering, Construction Management (20%) = $1,755,000
• Bicycle Rental Area	
• Pedestrian Access	Contingency (20%) = $1,755,000
• 500 Structured Parking Spaces	
	Total = $12,285,000

Appendix G
National Transit Summary

2007 National Transit Profile

General Information (Millions)

Service Consumption

Annual Passenger Miles	51,873.3
Annual Unlinked Trips	9,948.2
Average Weekday Unlinked Trips	32.8
Average Saturday Unlinked Trips	17.9
Average Sunday Unlinked Trips	11.9

Service Supplied

Annual Vehicle Revenue Miles	3,769.0
Annual Vehicle Revenue Hours	254.0
Vehicles Operated in Maximum Service	102,240
Vehicles Available for Maximum Service	125,636

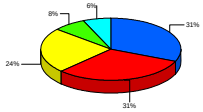
Financial Information (Millions)

Fare Revenues Earned	$10,638.1
Sources of Operating Funds Expended	
Fare Revenues (31 %)	$10,586.2
Local Funds (31%)	10,450.8
State Funds (24%)	7,938.3
Federal Assistance (8%) (***)	2,540.4
Other Funds (6%)	2,161.8
Total Operating Funds Expended	$33,677.5
Sources of Capital Funds Expended	
Local Funds (47%)	$6,374.4
State Funds (11%)	1,517.5
Federal Assistance (41%) (***)	5,561.3
Other Funds (1%)	117.6
Total Capital Funds Expended	$13,570.8

Summary of Operating Expenses (Millions)

Salary, Wages and Benefits	$21,145.7
Materials and Supplies	3,629.6
Purchased Transportation	3,541.4
Other Operating Expenses	2,987.0
Total Operating Expenses	$31,303.6
Reconciling Cash Expenditures	$2,255.1

Sources of Operating Funds Expended



Sources of Capital Funds Expended

Vehicles Operated in Maximum Service and Uses of Capital Funds

	Directly Operated	Purchased Transportation	Revenue Vehicles	Systems and Guideways	Facilities and Stations	Other	Total
Bus	43,143	8,265	$1,554.3	$448.5	$853.5	$187.5	$3,043.7
Heavy Rail	8,995	40	$770.5	$1,900.3	$1,763.6	$235.5	$4,669.8
Commuter Rail	4,748	686	$424.3	$1,114.7	$761.1	$122.6	$2,422.8
Demand Response	5,797	18,383	$153.2	$13.1	$34.1	$7.0	$207.3
Light Rail	1,312	58	$315.8	$2,268.7	$293.3	$92.4	$2,970.3
Ferryboat	73	30	$61.0	$0.9	$78.0	$5.1	$144.9
Trolleybus	413	0	$10.1	$19.8	$1.1	$0.5	$31.5
Cable Car	28	0	$1.4	$1.4	$0.0	$0.0	$2.8
Vanpool	5,560	2,212	$21.0	$0.1	$0.3	$0.4	$21.8
Automated Guideway	37	32	$0.1	$0.4	$1.0	$44.2	$45.8
Publico	0	2,355	$0.0	$0.0	$0.0	$0.0	$0.0
Monorail	0	8	$0.9	$0.0	$0.0	$0.0	$0.9
Inclined Plane	6	2	$0.0	$0.7	$0.2	$0.1	$1.0
Alaska Railroad	57	0	$1.1	$6.8	$1.3	$0.6	$9.8
Total	70,169	32,071	$3,313.8	$5,775.3	$3,787.5	$696.0	$13,572.7

Performance Measures

	Operating Expense per Vehicle Revenue Mile	Operating Expense per Vehicle Revenue Hour	Operating Expense per Passenger Mile	Operating Expense per Unlinked Passenger Trip	Unlinked Passenger Trips per Vehicle Revenue Mile	Unlink Passenger Tri per Vehi Revenue Ho
Bus	$8.7	$109.2	$0.8	$3.2	2.7	34
Heavy Rail	$9.2	$185.1	$0.4	$1.7	5.4	108
Commuter Rail	$13.5	$423.9	$0.4	$8.7	1.5	48
Demand Response	$3.9	$55.8	$3.3	$27.9	0.1	2
Light Rail	$14.1	$213.7	$0.6	$2.8	5.1	76
Ferryboat	$126.1	$1,198.6	$1.1	$7.0	18.0	171
Trolleybus	$18.0	$129.6	$1.3	$2.0	8.8	63
Cable Car	$93.8	$308.5	$5.4	$6.2	15.2	49
Vanpool	$0.8	$30.5	$0.1	$4.5	0.2	6
Automated Guideway	$41.3	$474.0	$6.2	$4.4	9.4	107
Publico	$1.0	$13.0	$0.2	$0.9	1.1	13
Monorail	$14.3	$135.9	$1.8	$1.6	9.0	85
Inclined Plane	$39.6	$119.0	$4.0	$1.3	30.0	90
Alaska Railroad	$25.2	$463.0	$1.4	$25.8	1.0	17

Modal Characteristics

	Operating Expenses (Millions)	Fare Revenues (Millions)	Uses of Capital Funds (Millions)	Annual Passenger Miles (Millions)	Annual Vehicle Revenue Miles (Millions)	Annual Unlinked Trips (Millions)	Annual Vehicle Revenue Hours	Fixed Guideway Directional Route Miles (*)	Vehicles Available for Maximum Service	Average Fleet Age in Years	Vehicles Operated in Maximum Service	Peak to Base Ratio	Perce Spar
Bus	$16,811.9	$4,473.8	$3,043.7	20,388.1	1,931.9	5,278.1	154.0	3,603.8	63,359	7.1	51,408	1.6	24
Heavy Rail	$5,888.3	$3,345.6	$4,669.8	16,138.0	638.5	3,460.2	31.8	1,623.5	11,222	21.6	9,035	1.7	24
Commuter Rail	$4,000.9	$1,981.4	$2,422.8	11,136.8	296.8	458.0	9.4	7,135.0	6,279	17.9	5,434	1.7	16
Demand Response	$2,538.6	$213.0	$207.3	777.7	645.1	91.0	45.5	N/A	29,462	3.6	24,180	N/A	23
Light Rail	$1,162.8	$309.3	$2,970.3	1,930.3	82.4	418.3	5.4	1,340.6	1,802	16.5	1,370	1.5	32
Ferryboat	$428.6	$116.6	$144.9	380.8	3.4	61.3	0.4	668.0	130	20.3	103	2.1	26
Trolleybus	$198.7	$58.8	$31.5	155.5	11.0	97.0	1.5	423.8	559	8.5	413	1.4	35
Cable Car	$44.0	$22.3	$2.8	8.2	0.5	7.1	0.1	8.8	40	97.8	28	1.5	43
Vanpool	$100.8	$51.2	$21.8	780.7	128.5	22.6	3.3	N/A	8,861	2.4	7,772	N/A	14
Automated Guideway	$92.1	$30.9	$45.8	14.9	2.2	20.9	0.2	18.0	86	10.5	69	1.1	25
Publico	$28.9	$28.2	$0.0	158.0	28.5	30.5	2.2	N/A	3,718	N/A	2,355	N/A	58
Monorail	$2.5	$2.7	$0.9	1.4	0.2	1.6	0.0	1.8	8.0	45.0	8	1.0	0
Inclined Plane	$2.1	$3.0	$1.0	0.5	0.1	1.6	0.0	2.8	8.0	77.5	8	1.0	0
Alaska Railroad	$3.4	$1.5	$9.8	2.4	0.1	0.1	0.0	958.0	102.0	25.1	57	1.0	79
Total	$31,303.6	$10,638.1	$13,572.7	51,873.3	3,769.0	9,948.2	254.0	15,784.3	125,636		102,240		

(*) Includes some double-counting for bus mode. These are the fixed-guideway miles at the agency's fiscal year end for all levels of service (A through F).
(**) Includes Federal capital funds used to pay for operating expenses. (***) Includes capital funds used to pay for capital projects.

Appendix H
Updated APA in Manchester

GUIDELINES FOR ROAD & HIGHWAY CONSTRUCTION/RECONSTRUCTION IN STATE AQUIFER PROTECTION AREAS

- Drainage System Design Criteria.

  - Select best management practices from the DEP stormwater manual based on treatment effectiveness and low groundwater pollution potential.
  - Sheetflow and swale collection is encouraged, where possible, outside of immediate wellfield area.
  - Catch basins and curbs should be used in immediate wellhead area to divert and control runoff and spills away from wellhead.
  - Dry wells or similar subsurface leaching structures should not be used for stormwater disposal from paved or other areas that have high potential to pollute groundwater; existing structures which have high potential to pollute groundwater should be removed or converted.
  - Gross particle/oil separators (swirl concentrator type) may be used for pretreatment of consecutive catch basins. Deep catch basins (minimum 4' deep and tight construction, with baffles, may also be used).
  - Stormwater discharge points shall outlet to aboveground land surface or basin type structures. Significant or critical discharge points should have a basin designed with a forebay (tight soil or lined) capable of containing an 8,000-10,000 gallon spill volume and 3-6 feet above water table, 4 feet above bedrock.
  - Potential strategic groundwater monitoring should be considered.

- Stormwater Pollution Prevention Measures

  - Ways to minimize pollutant load (sand, salt, etc.) should be examined.
  - Deicing management areas should be established including low salt use areas, alternative chemical or sand methods.
  - Wellhead protection signs shall be posted in clear visibility of the highway at the entrance and exit points of the aquifer protection area and at ½ mile intervals.

- Temporary Construction Measures.

  - Significant fuel, chemical or other hazardous materials storage and handling should be located outside wellfield area and aquifer protection area if possible.
  - Any necessary temporary storage should be aboveground, protected from rainfall, and on a impervious containment surface.
  - An emergency spill and response plan should be developed, including coordination with the water supplier.

AQUIFER PROTECTION AREA

Manchester Water Department
New State Road Wellfield

Legend

- Aquifer Protection Area Wells
- Final, Adopted
- Final, Not Adopted
- Preliminary

N
W E
S

0 750 1,500 3,000 Feet

Appendix I
Public Comments

Report of Meeting

Date: April 22, 2009
6:00 PM – 8:45 PM

Subject: Buckland Area Transportation Study
Public Meeting #3

Location: South Windsor Public Library Friends Room
1550 Sullivan Avenue
South Windsor, Connecticut

Attendance

Advisory Committee Members and Public who signed in:

Marjorie Breen	Manchester resident	Joseph Maddaluno	S. Windsor resident
Ken Buskamp	Manchester resident	Jim Mayer	Town of Manchester
Beth Caron	Shipman & Goodwin, LLP	Steve Mitchell	F. A. Hesketh Associates
Charles Carson	CT Transit	Edward Molans	S. Windsor resident
Curtis Cunningham	Manchester resident	John Murphy	S. Windsor resident
Paul Crumbie	S. Windsor resident	Mary Muzzy	S. Windsor resident
Annamae Davis	S. Windsor resident	Robert Pellegatto	S. Windsor resident
Bill Davis	S. Windsor resident	Ed Pilkington	Manchester resident
Robert Dickinson	S. Windsor resident	Gary Pitcock	S. Windsor resident
George Dobbs	S. Windsor resident	Cindy Shaw	Manchester resident
Jeff Doolittle	Town of S. Windsor	Dave Shaw	Manchester resident
Paul Dunia	S. Windsor resident	Bill Smith	Manchester resident
Jim Ehlers	S. Windsor resident	Lois Smith	Manchester resident
Karen Gamarsh	S. Windsor resident	Christopher Squires	Lebanon resident
Stan Gamarsh	S. Windsor resident	Doug Stewart	Manchester resident
Milton Gibbs	Manchester resident	Shirley Stewart	Manchester resident
John Grady	S. Windsor resident	Beverly Titus	S. Windsor resident
F. Greenway	Glastonbury resident	Thomas White	S. Windsor resident
Joan Jacobs-Williams	Manchester resident	Jim Williams	Manchester resident
Patrick A. Lausier	S. Windsor resident	John Young	S. Windsor resident
James Macdonald	S. Windsor resident		
Roselle Macdonald	S. Windsor resident		

Study Team:

Ranjit Bhave	Dewberry	James Morrin	CTDOT
Leslie Black	FHI	Paul Stanton	FHI
Mike Connors	CTDOT	Carmine Trotta	CTDOT
Dennis Flynn	AECOM	Grayson Wright	CTDOT
George Jacobs	Dewberry	Melanie Zimyeski	CTDOT
Tom Maziarz	CRCOG		

Welcome and Opening Comments:

Approximately 42 people from the general public attended this meeting. The meeting began with a general open house for the public to view study area maps and information about the study.

Leslie Black opened the formal presentation with introductions and an overview of the public participation process. This is the last of three public meetings to present study findings in order to collect public input to assist the study process as it moves forward. The public were

encouraged to visit the study website, www.bucklandstudy.org to keep informed about the study and provide comments via the website survey and contact site. Comments from the public will be taken until May 22, 2009.

James Morrin discussed the current status of the study.

George Jacobs made a PowerPoint presentation about the study findings and proposed recommendations for highway, local roadway, bicycle and pedestrian pathway, and transit options.

The public audience then adjourned back to the open house format where maps showing each proposed recommendation were made available for the public to view and provide feedback/make suggestions for each proposed recommendation. Comments and questions are recorded as follows:

Comments & Questions Discussion

General Comments/Suggestions:

1) What is the stated goal of the overall project? **Mr. Jacobs responded that the improvement concepts were developed to reduce congestion, improve safety, and support/promote sustainable development of the Buckland area.**

   Follow-on question: Is this project a subsidy for more development? **Mr. Jacobs referenced the Land Use Report. He conceded that he could not summarize verbatim the findings of the report and he acknowledged that the land use specialist was not in attendance at the meeting. He did emphasize that it is a comprehensive report that projects out into the future and that it has been vetted through the Towns and the CRCOG and that the commenter should have a look at the report.**

2) What is the timeline for design and for construction?
   Mr. Jacobs mentioned that the study includes a wide range of alternative improvements, some big ticket and some small ticket, that will need to be prioritized by the Towns and CRCOG. There will be a need to conduct environmental studies and permitting on some of the improvements, and preliminary design and final design will have to occur as well. These environmental and design steps will take on the order of five years to complete depending on a given project. There is independent utility for the improvement concepts presented in the Buckland Area Transportation Study (BATS).

3) A commenter asked about funding. Where will all the money come from? **Mr. Jacobs stressed that the study includes various improvement recommendations that will fit various size pocket-books and that the money will come from a wide variety of sources including federal grants, state, local, private, etc.**

Highway/Roadway Comments:

4) A request was made to clarify details regarding access to I-291 (existing conditions compared to what is being proposed as an improvement). It was stated by the commenter that you cannot get to I-291 from I-384 under the present configuration despite the ramps/frontage roads running virtually parallel to each other. **George Jacobs responded that although the ramps/frontage roads are near each other, geometrically it is very difficult to connect the two due to grade differences (i.e. a slip ramp between the two is just not possible due to geometry).**

5) Going from I-84 to I-291, under the improvements, what exit would you take…Pleasant Valley? **Mr. Jacobs answered in the affirmative.**

6) How long will residents be inconvenienced by the construction of the Route 83/Route 30 CTDOT project (this CTDOT project is separate from the improvement concepts included in the Buckland Study)?
Jim Morrin answered this question and indicated that the project will not be a significant inconvenience to the public as construction will be phased so that the existing roads will be maintained and opened to traffic during construction.

7) Do any of the improvement concepts focus on traffic signalization issues in the Buckland Area? During off-peak times the cycles need to be adjusted as there are many times when you wait at a light for nothing (there is no traffic). **Town planners responded that signal synchronization is under review currently.**

8) Will the auxiliary lane be a single or double lane in Zone 3? **Mr. Jacobs explained typical auxiliary lane widths, and Tom Maziarz added that widening would occur within the median and not involve property takes.**

9) A question was posed about the auxiliary lane and how it will accommodate Mall traffic. **Mr. Jacobs explained that the auxiliary lane will facilitate the up-weaving and down-weaving traffic movements, thereby reducing turbulence on the main line.**

10) A question was asked about the new I-84 eastbound (EB) off-ramp to Route 30 near Avery Street and how that would work. **Mr. Morrin responded with how traffic movements would occur with the improved off-ramp.**

11) Staying in the same vein as the Question 10, a commenter asked how drivers would take a left hand turn onto Hale Road if they had just exited off of the new I-84 EB ramp onto Route 30**. Mr. Morrin explained that drivers making this move would have to merge over one lane to the left.**

12) A South Windsor resident made a series of comments relative to three older studies that were conducted for the area, one that actually lead to the closure of Slater Road. He said they are the main reason why the study area developed like it did. He mentioned that he would like to see Slater Street opened up as it is like a valve on a hose – it can relieve pressure. It only makes sense to do this as it would provide a quicker route to the Manchester Hospital from the senior housing developments that have popped up on Oakland Street and Buckland Road. He complained that when he leaves his driveway he has to travel north to go south.

13) A commenter asked the study team to explain the proposed Evergreen Walk bypass that enters from Pleasant Valley Road across Smith Street. **Mr. Jacobs explained that the connection to Evergreen Walk provides an alternative route to Buckland Road thereby reducing the traffic at the intersection of Pleasant Valley Road and Buckland Street.**

14) A resident mentioned her concern about safety at the Oakland Street/Deming Street intersection. **The study team is aware of that intersection.**

15) A resident asked if a former frontage road connection to Tolland Turnpike near the cemetery could be reinstated. **Mr. Jacobs discussed this one-on-one with the commenter at the maps after the meeting. This option was not examined in this study. However, if the commenter is interested, he can contact CRCOG and make suggestions as the process continues in the future.**

16) Can a signal be added to the Rte. 30/Macintosh intersection? What happens if the Redstone Road Connector is not built and is not a cure all? What improvements will alleviate traffic under that scenario? **Mr. Morrin replied, the signal cannot be added at the said intersection mainly because of its proximity to the intersection of Deming Street and Avery Street. The study team believes that Redstone Road will act like a pressure relief valve by providing alternate routes to motorists/bicyclists to reach their desired destinations. There is no other way to alleviate congestion with something similar to Redstone Road Connector.**

17) Will signage be improved in the near term? **Mr. Jacobs discussed this in detail and also explained the need for identification placards on service roads to facilitate emergency response in the study area.**

Transit Comments:

18) One commenter asked if the rail line would be made viable for commuters as part of this study. **Mr. Jacobs mentioned a previous Bus Rapid Transit (BRT) study that looked at that rail corridor from Hartford to Manchester. If the transit center proposed in this BATS study comes to fruition, it will likely tie into the BRT transit system if that too were to be implemented.**

Bicycle Pedestrian Comments:

19) What were the safety considerations associated with the study, especially related to pedestrians and bicyclists? **Mr. Jacobs stated that bicycle pedestrian groups met with the study team in a stakeholder meeting and identified their areas of concern and bike/pedestrian pathway connectivity in the study area. Their input has been included in the final report.**

20) Is there a way to connect the Tolland Road/I-384 bikeway to the Buckland Area and Evergreen Walk? **Future design elements would incorporate bicycle / pedestrian access.**

Report of Meeting

The meeting adjourned at 8:30 p.m.

Prepared by: *Leslie Black*
Leslie Black

Approved by: *Melanie Zimyeski*
Melanie Zimyeski

Bhave, Ranjit

From: formmailer@secureserver.net
Sent: Sunday, May 03, 2009 11:17 PM
To: info@bucklandstudy.org
Subject: bucklandstudy.org-Buckland Transportation Study

01title: Mr.
02fname: Steve
03lname: Weitz
04company:
05address1: 303 Oak St
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: drptraf1003@att.net
11comments: From what I see, the proposed road links should greatly improve circulation in the area. A couple of minor, low-cost suggestions (I'm a municipal traffic engineer): (1) People constantly get lost & ask directions on Rt.30 in the area between Hale Rd & the 84 EB ramps, because the signs say north when you're heading south & vice-versa. The signs are not just on Rt.30, but also side streets & in private lots. I tried to get the STC to change this years ago, without successs. Their position was that this area was a blip in an otherwise north-south orientation, but I'd argue that no one travels this road for a great distance, and if anything, it's more east-west oriented. Hopefully, you can get common sense to prevail & figure out an acceptable solution. (2)Although I generally agree with the issue of not signing to private businesses on public streets, the shortage of such signing in this case causes many to pass their destinations or make last second lane changes. Even Walmart has no sign from the primary access road. It would be helpful to address this.....Good luck with the project, especially the funding.
12mailing: No
MM_insert: comments_form
Submit: Submit
wsp_code: KRqRB
wsp_key: d0a21dbce5d919ffa62cb08598c2baa7

This e-mail was generated from a form submission on your website: bucklandstudy.org at 5/3/2009 8:17:15 PM

Bhave, Ranjit

From: formmailer@secureserver.net
Sent: Sunday, April 26, 2009 9:57 PM
To: info@bucklandstudy.org
Subject: bucklandstudy.org-Buckland Transportation Study

01title:
02fname: Karen
03lname: Gamarsh
04company:
05address1: 92 Judy Lane
06address2:
07city: South Windsor
08state: CT
09zip: 06074
10email: karenandstan1@cox.net
11comments: The concern for myself and others who live just west of the Buckland Hills area is the lack of an exit from either E 84, W 384 or N 291, that would allow us to avoid going as far as the Buckland Hills exit. At the public information meeting on April 22nd we did see a plan that would put an exit on Pleasant Valley Road and this would indeed alleviate the problem for some of us but there are many who would prefer an exit in the Tolland Street area. This would take away from the traffic congestion on Pleasant Valley as well as Buckland Road, since those of us who live west could use Chapel St. to avoid those areas completely. As one gentleman pointed out at that meeting, there was once an exit on Tolland Street from I 84 but the powers that be must have decided we must all go to the mall. And by the way, the Plaza at Buckland Hills on Pleasant Valley could use some redesign as well. You can enter it from three points but you can only exit from two and one of those (Buckland St), you can only go right. To make matters worse, The sole entrance/exit that allows one to turn in any direction is also the only way in and out of the new Boston Pizza restaurant and Hampton Inn Suites. I got stuck in traffic for 20 minutes while trying to leave the Joannes store last winter. PLEASE consider making the enter only driveway into a two-way.
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: au7nw
wsp_key: 8f6072d960f1dafb0e83ed27df6aecc5

This e-mail was generated from a form submission on your website: bucklandstudy.org at 4/26/2009 6:57:14 PM

Bhave, Ranjit

From: formmailer@secureserver.net
Sent: Tuesday, April 14, 2009 5:08 PM
To: info@bucklandstudy.org
Subject: bucklandstudy.org-Buckland Transportation Study

01title: Mr.
02fname: Bob
03lname: Cohs
04company: JCPenney
05address1: 1339 Tolland Turnpike
06address2:
07city: Manchester
08state: CT
09zip: 06042
10email: rcohs1@jcpenney.com
11comments: Has any consideration been given to adding a means of relieving congestion at the West end of the study area? I see the ES 1.4.1.6 and ES 1.4.1.7 reviews, but these seem to take into account that the only option to get into the shopping area is via I-84?s & I-384?s East-bound dump-off onto Buckland Street. This exit ends up becoming highly congested, and during the holidays cars sit it the middle of the intersection through the light change-overs, adding to the congestion. I realize your draft is a final, but if I-291 North were given a Tolland Turnpike exit (it currently only has one for South-bound traffic), or even a Pleasant Valley Road exit, this would relieve a good portion of that pressure.
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: RnRw7
wsp_key: 3509d5a037a4a0266b5e13cc691c8a48

This e-mail was generated from a form submission on your website: bucklandstudy.org at 4/14/2009 2:07:38 PM

Bhave, Ranjit

From: formmailer@secureserver.net
Sent: Tuesday, April 14, 2009 4:57 PM
To: info@bucklandstudy.org
Subject: bucklandstudy.org-Buckland Transportation Study

01title: Mr.
02fname: Bob
03lname: Cohs
04company: JCPenney
05address1: 1339 Tolland Turnpike
06address2:
07city: Manchester
08state: CT
09zip: 06042
10email: rcohs1@jcpenney.com
11comments: Not sure if you were aware of this, but Figure ES2 (http://www.bucklandstudy.org/documents/documents_page/Draft%20Final%20Report/Executive%20Summary.pdf) relies on an old satellite image. As such, this shows the new Red Stone Overpass going directly through where Smokey Bones restaurant is currently built.
12mailing: Yes
MM_insert: comments_form
Submit: Submit
wsp_code: LfdDw
wsp_key: 3509d5a037a4a0266b5e13cc691c8a48

This e-mail was generated from a form submission on your website: bucklandstudy.org at 4/14/2009 1:57:19 PM

Town of Manchester

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June 4, 2009

James Morrin
Transportation Supervising Planner
Connecticut Department of Transportation
2800 Berlin Turnpike
Newington CT 06131-7546

Re: Buckland Area Transportation Study Draft 3/18/09

Dear Mr. Morrin:

I am writing to express a concern with one of the recommendations in the Buckland Area Transportation Study Draft Final Report dated March 18, 2009.

Although the Draft Report has many sound and beneficial recommendations that will improve transportation access to and within this area which we look forward to seeing implemented, we feel strongly that this particular recommendation needs further and more detailed study to look at the potential unintentional negative consequences of this proposed change.

The recommendation is identified as "ES 1.4.1.2 – Access improvements at I-84 westbound (new) ramp Exit 63"

On page ES 7 of the report, this recommendation states:

A new off-ramp from I-84 westbound will be provided for traffic exiting to travel northbound on Route 30 (Deming Street). The ramp will merge onto Route 30 between I-84 and McIntosh Drive. Access to McIntosh Drive will be considered during the preliminary design phase. The existing I-84 westbound off-ramp to N.B./S.B. Route 30 (Deming Street) will be converted to an exit ramp for traffic traveling southbound (only) on Route 30 Deming Street. This will be achieved through modifications to the ramp and signal configuration where it meets with Route 30.

The Manchester Board of Directors is very concerned about the impact this recommended change will have on the Bryan Farms neighborhood, located just north of I-84 and Route 30. This is a neighborhood that has been significantly impacted over the years by the expansion of both the Interstate highway and the continued widening of Route 30 (Deming Street). The current traffic conditions make it extremely difficult for residents to enter and exit from McIntosh Street and the new ramp that is contemplated in this proposal will almost force the entire closing of this street. It this occurs, all traffic in this neighborhood will be forced to use Elberta Road as the only means of egress. Currently exiting this neighborhood at this location is also very difficult based on the traffic volumes on Avery Street and the topography at this intersection.

We strongly recommend that before any further action is taken on this recommendation, that the Department conduct a thorough and detailed traffic study of the Bryan Farms neighborhood and the surrounding streets (which would, of course, provide for public hearing) to not only determine the impact this change will have, but also to explore opportunities to improve the area for those living in it.

Respectfully submitted,

Scott Shanley
General Manager

cc: Carmine Trotta, Transportation Assistant Planning Director, Intermodal Planning
Tom Maziarz, Capitol Region Council of Governments
Mark Carlino, Director of Public Works, Town Engineer
Board of Directors

Response: Buckland Area Traffic Study as it pertains to the Bryan Farms Neighborhood

Connecticut Department of Transportation,
Federal Highway Administration,
Capitol Region Council of Governments,
James Morrin
Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, CT 16131-7546

Dear Sir or Madam,

After seeing the final report on recommended upgrades to the infrastructure surrounding the Buckland Mall I wish to pass on some information about our residential neighborhood Bryan Farms that's only reference in the report was "Vestige of residential use".

I may need to correct my last statement there was one other mention in the report, the condemning of the properties that border the highway. This is not so much a statement but a map showing partial condemnation of the rear yards.

It appears that this same mentality has surfaced again; condemn the land to expand the highway. This seems to be the only option being considered for exit 63. Most all other plans for any road improvements in this report have several alternatives, but not this one. It also calls for the removal, in its entirety; of our long time neighbor the Smith's house on Baldwin.

The parties involved in the study may not know the history of the current highways design and the role the Bryan Farms neighborhood played in these earlier designs (I have copy of plans on cd). The owners along Bryan Drive and Baldwin chose not to accept that their houses would be demolished for the construction of the highway. The entire Bryan Farm community joined in that fight. The result was the bend you currently see in Interstate 84 at exit 63. It also explains the current access ramp locations.

I have only had a few days to talk to my friends and neighbors. To sum up the reaction, it would suffice to say that no one is agreeable to this proposed change. We currently live with invasive road noise (how was this area missed in your noise report/areas with concern of noise from mall traffic?). Our homes sit on the same bedrock as Interstate 84. The homes now have a constant vibration, hairline plaster cracks constantly reappear after repair. The Jake Brakes shake us out of our beds at night. Now they suggest moving the road and all the negatives that accompany it even closer, I think not.

Adding to our current problems are ones that haunt us from the last major renovation. The hill behind the homes that are exposed to the highway were shortened in some places by 20 feet and now have ereoded down several more feet exposing us to more road noise. Any inquires I have made about extending the sound barrier have been fruitless; any correspondences received back were either condescending or useless.

Entering or exiting the Bryan Farm neighborhood has become both frustrating and dangerous. Restricting the use of Macintosh and Deming without giving us improvements at Avery and Alberta is also a concern. What about pedestrian traffic? We have Northwest Park approximately a half mile away, it might as well be 15 miles away. I have walked to the car dealers along Route 30 and the park as well. Each time I felt my life was in peril when navigating my way to both destinations. How would you feel about your child walking or riding his or her bike to the only recreation facility available to our neighborhood?

We have been taking it on the chin for poor planning and getting no relief from either the Town of Manchester or The State of Connecticut. Mr. Genovese championed this cause the last time around, his name is on the overpass we drive over each day. We hope to continue in the sprit of his work to keep our neighborhood from being taken piece by piece, further isolating our little corner of Manchester.

Curtis Cunningham
83 Bryan Drive
Manchester CT 06042